DOCUMENT RESUME

ED 384 471 RC 020 174

TITLE	Teachers As Researchers: Improving Practice in Rural and Small Schools. Rural, Small Schools Network Information Exchange: Number 11, Fall 1991.
INSTITUTION	Regional Laboratory for Educational Improvement of the Northeast & Islands, Andover, MA.
SPONS AGENCY	Office of Educational Research and Improvement (ED), Washington, DC.
PUB DATE	91
CONTRACT	RP91002008
NOTE	244p.
AVAILABLE FROM	Contains some broken print. Photographs will not reproduce adequately.
PUB TYPE	Collected Works - General (020)
EDRS PRICE	MF01/PC10 Plus Postage.
DESCRIPTORS	*Action Research; Educational Practices; Educational Research; Elementary Secondary Education; Higher Education; *Professional Development; *Reflective Teaching; *Rural Education; Self Evaluation (Individuals); *Teacher Improvement; *Teacher Role
IDENTIFIERS	*Teacher Researchers

ABSTRACT

This packet includes reprints of journal articles and other information exploring reflective practice and action research among rural educators. The four sections of the packet cover concepts of reflective practice and action research; examples of reflective practice at both the elementary and secondary levels; issues such as encouraging reflective practice on a school-wide basis to improve staff development, evaluation, administrative practice, and curriculum development; future trends in action research; and additional resources. Articles include: (1) "Reflective Practice: A New Agenda for Education" (Karen F. Osterman); (2) "Synthesis of Research on Teachers' Reflective Thinking" (Georgea Mohlman Sparks-Langer, Amy Berstein Colton); (3) "Reconstructive Reflective Teaching: A Review of the Literature" (Joan Tedrow Gilson); (4) "Teacher Development in Professional Practice Schools" (Ann Lieberman, Lynne Miller); (5) "Award Heralds Recognition of the Role of Teachers As Researchers" (Robert Rothman); (6) "What Teachers Say about Reflection" (Christine Canning); (7) "Secondary Perspectives, Classroom Action Research: The Teacher As Researcher"; (8) "Halls of Mirrors: The Introduction of the Reflective Mode" (Margaret Anzul, Margot Ely); (9) "The Light at the End of the Journal: A Teacher Learns about Learning" (Margaret M. Voss); (10) "Why Do Pirates Have Peg Legs? A Study of Reading for Information" (Doreen Gregson); (11) "Writing Reflectively" (Betsy Sanford); (12) "Using Action Research To Navigate an Unfamiliar Teaching Assignment" (Mary Dicker); (13) "Finding the Value in Evaluation: Self-Assessment in a Middle School Classroom" (Linda Rief); (14) "Middle Level Teachers' Perceptions of Action Research" (Deborah Sardo Brown); (15) "Effective Administration Through Reflective Practice" (Ann Weaver Hart); (16) "The Evolution of a Reflective Coaching Program: School-University Collaboration for Professional Development" (Keith Hillkirk, James F. Nolan); (17) "Collaborative Action Research and Staff Development in the Middle School" (Gerald Pine); (18) "School Renewal as Cultural Change" (Bruce Joyce and others); (19) "Nurturing the Reflective Practitioner through Instructional Supervision: A Review of the Literature" (James F. Nolan, Tonya Huber); (20) "Means for Facilitating Reflection" (Robert B. Kottkamp); and (21) "Action Research: Comments on Current Trends and Future Possibilities" (Diane W. Kyle, Ric A. Hovda). Included in Section 4 is a list of additional resources. (LP)

ED 384 471

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it

☐ Minor changes have been made to improve reproduction quality

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Janet Angelis

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

The Regional Laboratory
for Educational Improvement of the Northeast & Islands

Dear Rural, Small School Leader: Fall 1991

Reflective practice is the use of inquiry as a means of improvement. It is the practice of stepping back from the everyday to observe the "how" and "why" of our actions--to question our assumptions and habits. Reflective practice has emerged as a dominant theme in much of today's professional literature, both in and outside the field of education. In all of this literature the emphasis is placed on the role of the individual. As Ikujiro Nonaka states, "In the knowledge-creating (system), inventing new knowledge is not a specialized activity--the province of the Research and Development department--it is a way of behaving, indeed a way of being, in which everyone is a knowledge worker--an entrepreneur." (Harvard Business Review, 1991). **Teachers As Researchers: Improving Practice in Rural and Small Schools**, the Rural, Small Schools Network Information Exchange Packet Number 11, explores the concept of reflective practice in educational settings.

Teachers As Researchers: Improving Practice in Rural and Small Schools is divided into four sections, all of which build on and complement the others. The first section provides an overview to the concepts of reflective practice and action research. The second looks at examples of reflective practice by classroom teachers. Examples are provided from the primary through secondary levels. Section three deals with issues around supporting and encouraging reflective practice on a school-wide basis to improve staff development, evaluation, administrative practice, and curriculum development. The final section discusses future trends in action research and provides a list of resources for those interested in further reading on the topic.

We have provided an evaluation card so you can let us know how useful you have found this information. We also welcome your suggestions for future Information Exchange Packet topics. Please jot any ideas you may have on the card or contact us at the Rural, Small Schools Network, 83 Boston Post Road, Sudbury, MA 01776, (508) 443-7991.

You may order additional copies at a cost of $15.00 plus $2.50 postage and handling. Please send orders directly to the Publications Department of The Regional Laboratory at 300 Brickstone Square, Suite 900, Andover, MA 01810, and cite order number 9086.

Sincerely,

Carolyn J Burke

John R. Sullivan, Jr., Ed.D.
Program Director
Rural, Small Schools Network

Carolyn J. Burke, Ed.D.
Associate Program Director
Rural, Small Schools Network

RC020174

Rural, Small Schools Network, 83 Boston Post Road, Sudbury, MA 01776

Serving New England, New York, Puerto Rico, and the U.S. Virgin Islands

300 Brickstone Square, Suite 900 • Andover, MA 01810 • (508) 470-0098 • Fax (508) 475-9220

CONTENTS

TEACHERS AS RESEARCHERS: IMPROVING PRACTICE IN RURAL AND SMALL SCHOOLS

SECTION 1:

"REFLECTIVE PRACTICE, A New Agenda for Education," by Karen F. Osterman, Education and Urban Society, Vol. 22 No. 2, February 1990.

"Synthesis of Research on Teachers' Reflective Thinking," by Georgea Mohlman Sparks-Langer and Amy Berstein Colton, Educational Leadership, March 1991.

"Reconstructive Reflective Teaching: A Review of the Literature", by Joan Tedrow Gilson, 1989, an ERIC publication. ED327481.

"Teacher Development in Professional Practice Schools," by Ann Lieberman and Lynne Miller, Teachers College Record, Volume 92, Number 1, Fall 1990.

"Award Heralds Recognition of the Role of Teachers as Researchers," by Robert Rothman, Education Week, December 12, 1990, Volume X Number 15.

SECTION 2:

"What Teachers Say about Reflection," by Christine Canning, Educational Leadership, March 1991.

"SECONDARY PERSPECTIVES, Classroom action research: The teacher as researcher," Journal of Reading, December 1989.

"Halls of Mirrors: The Introduction of the Reflective Mode," by Margaret Anzul and Margot Ely, Language Arts, Volume 65, Number 7, November 1988.

"The Light at the End of the Journal: A Teacher Learns About Learning", by Margaret M. Voss, Language Arts, Volume 65, Number 7, November 1988.

"Why do Pirates have Peg Legs? A Study of Reading for Information," by Doreen Gregson, an exerpt from Practitioner Research in the Primary School, edited by Rosemary Webb, The Falmer Press, 1990.

"Writing Reflectively," by Betsy Sanford, Language Arts, Volume 65, Number 7, November 1988.

"Using Action Research to Navigate an Unfamiliar Teaching Assignment," by Mary Dicker, Theory Into Practice, Volume XXIX, Number 3, Summer 1990.

"Finding the Value in Evaluation: Self-Assessment in a Middle School Classroom," by Linda Rief, Educational Leadership, March 1990.

"Middle level teachers' perceptions of action research," by Deborah Sardo Brown, Middle School Journal, November 1990.

SECTION 3:

"Effective Administration Through Reflective Practice," by Ann Weaver Hart, Education and Urban Society, Vol. 22 No. 2, February 1990.

"The Evolution of a Reflective Coaching Program: School-University Collaboration for Professional Development," by Keith Hillkirk and James F. Nolan, 1990, an ERIC publication. ED327483.

"Collaborative Action Research and Staff Development in the Middle School," by Gerald Pine, Middle School Journal, November 1986.

"School Renewal as Cultural Change," by Bruce Joyce, Carlene Murphy, Beverly Showers, and Joseph Murphy, Educational Leadership, November 1989.

"Nurturing the Reflective Practitioner Through Instructional Supervision: A Review of the Literature," by James F. Nolan and Tonya Huber, Journal of Curriculum and Supervision, Winter 1989, Vol. 4, No. 2.

"Means for Facilitating Reflection," by Robert B. Kottkamp, Education and Urban Society, Vol. 22 No. 2, February 1990.

SECTION 4:

"Action Research: Comments on Current Trends and Future Possibilities," by Diane W. Kyle and Ric A. Hovda, Peabody Journal of Education, Volume 64, Number 3, 1987 (published in 1989).

SECTION 1

Reprinted with permission from Education and Urban Society, Vol. 22 No. 2, February 1990.

REFLECTIVE PRACTICE
A New Agenda for Education

KAREN F. OSTERMAN
Hofstra University

Chris Argyris and Donald Schön began, in 1971, what was to become a continuing inquiry into the dynamics of effective leadership. Asked to consider how to assist educational administrators to become more effective in initiating school reform, they observed that people's ideas about how things work, their "theories of action," were central to their effectiveness as leaders: to become more effective in school reform, administrators needed to learn not simply new skills, but new "theories of action" (Argyris & Schön, 1974).

This assumption prompted another important question: How do professionals become skilled, how do they learn new theories of action? After nearly a decade of inquiry, Schön (1983) concluded that skilled practitioners are reflective practitioners; they utilize their experience as a basis for assessing and revising existing theories of action to develop more effective action strategies.

Emphasizing the importance of reflection as a key element in professional growth, Schön also addressed the necessity for examining these theories of action within the context of professional practice. He maintained that there is a core of artistry, an exercise of intelligence, and a kind of knowing inherent in professional practice, which we can only learn about by carefully studying the performance of extremely competent professionals. Posing a challenge to educators, Schön (1987) and Argyris & Schön (1974) called for a reexamination of professional education to develop more effective means of educating professionals to this "artistry" of knowing.

This challenge has been met. During the last few years, there has been a growing interest in reflective practice as a means of professional development. In the field of education, teachers and administrators have seen rapid growth in the number of pre-service and in-service programs that incorporate the concepts of reflective practice—programs which use experience and

EDUCATION AND URBAN SOCIETY, Vol. 22 No. 2, February 1990 133-152
© 1990 Sage Publications, Inc.

reflection to develop professional skills. This emphasis on reflective practice represents an important change in approach to professional education; but, more importantly, the interest in reflective practice signifies some important and dramatic changes in our ideas about school leadership and school reform.

This article reviews the concept of reflective practice within the framework of experiential learning theory, discusses ways in which reflective practice advances professional practice, and explores the implications of these ideas for professional education and for school reform.

REFLECTIVE PRACTICE: AN OVERVIEW

Reflection is concentration and careful consideration, and reflective practice is the mindful consideration of one's actions, specifically, one's professional actions. This reflective practice, however, is far more than leisurely speculation on one's own successes and failures, and far more than the pursuit of knowledge for its own sake. Rather, reflective practice is a challenging, focused, and critical assessment of one's own behavior as a means towards developing one's own craftsmanship. While reflection is certainly essential to the process, reflective practice is a dialectic process in which thought is integrally linked with action. It is, as Schön describes, a "dialogue of thinking and doing through which I become more skillful" (1987, p. 31).

Prompted by a problem, a discrepancy between the real and the ideal, or between what occurred and what was expected, the practitioners step back and examine their actions and the reasons for their actions. They reflect on the effectiveness or legitimacy of these action choices, and they use this new perception as a means of developing alternate strategies. Through this dialectic process of thought and action, the practitioner takes an active role in shaping his or her own professional growth.

Reflective practice is a professional development method which enables individual practitioners to become more skillful and more effective. It is also a process that has a potentially positive impact on organizational effectiveness. As the following discussion explains, reflective practice enhances professional practice in several ways. It leads to greater self-awareness, to the development of new knowledge about professional practice, and to a broader understanding of the problems which confront practitioners. Because it enhances professional growth, and thereby responds to the needs of individual practitioners, it also influences the environment of the workplace in ways that support organizational change and effectiveness.

SELF-AWARENESS

While the term "reflective practice" was coined and popularized by Donald Schön, the argument that reflection is a critical step in professional development is historically rooted in a tradition of learning theory. Kolb's (1984) exploration of experiential learning traces a common theme — developed by Dewey, Lewin, and Piaget — that learning is dependent on the integration of experience with reflection, and of theory with practice. While each of these theorists argued that experience is the basis for learning, each also maintained that learning cannot take place without reflection. All viewed learning as a sequential process, consisting of four stages: concrete experience, observation and reflection, formation of abstract concepts or generalizations, and active experimentation.

Experience provides the basis for learning: a problem or unexpected event prompts an inner sense of discomfort and perplexity. If this event is to create change, or to stimulate growth, the person must make meaning of that event, examine it, and appraise the activity. Out of this process of observation and reflection comes new meaning, alternative perspectives, and new views about how things work. These new perspectives then provide the rationale for experimentation. The learning process ends and begins anew as these new ideas become integrated into behavior.

While experience may serve as the stimulus for learning, reflection is the essential part of the process that makes it possible to learn from experience. Without reflection, theories of action are not revised and, until new concepts, ideas, or theories of action begin to influence behavior, learning will not occur.

Professional growth often depends not merely on developing new ideas or theories of action, but on eliminating or modifying those old ideas that have been shaping behavior. As Kolb explains: "All learning is relearning. Everyone enters every learning situation with more or less particular ideas about the topic at hand. . . . Some of our theories are more crude and incorrect than others. . . . Thus one's job as an educator is not only to implant new ideas but also to dispose of or modify old ones" (1984, p. 28).

Before ideas can change, they must be identified. Our behavior is shaped by our ideas — ideas which have been shaped by countless experiences, cues, and reinforcements from our culture. In some cases, these ideas or theories have outlived their usefulness. New knowledge may have generated more appropriate, more effective ideas. Yet, because our old ideas are so deeply engrained, they may continue to shape our behavior even though, at some level, we accept the validity of the new information. In the vernacular of reflective practice, this appears as a contradiction between the espoused theory and the theory-in-use. Our actions are not always consistent with our intent; what we say we believe (espoused theory) sometimes differs from what we actually do (theory-in-use). These contradictions are quite common in the school context, but in many cases they are detected only through a process of careful observation, initiated in response to a perceived problem.

Studies of time on task and equity in the classroom illustrate the discrepancies between intent and behavior, and show how we often fail to understand our own behavior and its impact. There are few teachers or administrators who would not wholeheartedly agree that all children should be treated equitably within the classroom. Yet the reality is far different. Observational studies have repeatedly demonsrated that children are treated differently depending on such characteristics as gender, race, and ability level. There are few school personnel who would dispute the statement that schools are places for learning. Yet, observation shows that over the period of the day, there is relatively little time devoted to instruction. Administrators, too, have learned that, although their first priority is instructional improvement, their time is diverted into countless other directions.

Theory X and Theory Y, described by Douglas McGregor (1960), provide another illustration of the discrepancies between espoused theory and theory-in-use. The Theory X-Y distinction poses two different and contrasting sets of assumptions about people. Theory X assumes that the average person resembles the Army's "goldbricker" who inherently dislikes work and will avoid responsibility wherever possible. People who hold this view tend to believe that people will do what they have to do only if they are closely supervised and controlled by someone – typically a higher echelon authority – who knows the "right" path. While there are few people would claim to espouse these views, there is evidence that suggests that Theory X is a widespread theory-in-use within our schools. Whether one looks at relationships between administrators and teachers, between schools and community, or between teachers and students, the impact of Theory X is apparent in assumptions, language, and actions. Teachers assume that the inner-city parents' failure to attend PTA meetings represents a lack of concern, and they become reluctant to contact parents to provide information or obtain support. Administrators assume that teachers' lack of creativity in the classroom signifies a lack of caring or commitment, and they utilize the supervisory process to provide judgment rather than support. In each of these examples, there is an assumption that people act out of less-than-noble motives. In some cases, this assumption may be correct; in others, it may not. The important point, however, is that the assumption directly or indirectly influences the actions and interactions which follow, whether it be in the form of an upraised eyebrow, a particular tone of voice, or a decision about policies and procedures.

These examples illustrate how deeply-engrained assumptions (theories-in-use) may contradict what we espouse, may shape our behavior in ways that may not have the desired impact, and may defeat our best efforts to change. In these situations, the desire to change, or to develop more positive modes of interaction, are blocked by deeply engrained ideas. "Resistance to new ideas stems from conflict with old beliefs that are inconsistent" (Kolb, 1984, p. 28).

Reflective practice challenges us to discover those habits of belief or behavior which preserve the inadequacies of the current system and prevent the introduction of new and better approaches to education. Through the reflective process, we subject our own actions to critical assessment. By posing questions about our own behavior – What am I doing? Why? With what effect? – we develop new perspectives, new ways of looking at our own actions, and a new awareness or understanding of our behavior. In Brookfield's terms, through reflection, or critical thinking, "patterns of behavior become clear, habitual responses are identified and insights dawn regarding the nature of our assumptions and motivations." With this understanding, "People can make some judgments about the effectiveness of different actions in changing some aspects of their lives, and they can try to learn from whatever errors they have made" (1987, p. 78). As we become more aware of our theories-in-use, we become more aware of contradictions between what we do and what we hope to do; as a result, we can shape new directions.

KNOWLEDGE OF PROFESSIONAL PRACTICE

By increasing self-awareness, the reflective process creates opportunities for continued professional growth. Reflective practice also contributes to professional growth in another way. As the above examples demonstrate, professionals are often unaware of the many ways in which their own behavior is self-defeating. At the same time, they are often unaware of the many ways in which their actions are highly effective.

A good educator – teacher or administrator – is a skilled craftsman, but that knowledge is not always at a conscious level. Effective practices become as deeply engrained in behavior as ineffective practices. Over the last decade, efforts to discover more about the craft of teaching have demonstrated that the master teacher is often unable to explain what combination of strategies leads to their impressive results, which are readily apparent to administrators, other teachers, students, and parents. It goes without saying that there is mastery, but being able to share that knowledge to help someone replicate the skilled performance is another matter.

If one aspect of professional growth is to identify and change those habits which minimize our effectiveness, another equally important aspect is to recognize and support those habits which enhance professional accomplishment. If reflective practice challenges educators to identify which aspects of performance need improvement, it also challenges them to elucidate and clarify the successful strategies that are evident in the practice of skilled practitioners. Reflective practice asks not only that we develop a conscious awareness of the craft of practice, but also that we develop an ability to articulate that knowledge. In Friere's language, as Kolb (1984) explains, we are required to "name the world"; and, in naming, we give meaning to the world around us. By articulating tacit knowledge, professional skills can be shared and can become part of an enriched body of knowledge which will serve as an explicit guide for others who seek to improve their performance.

The reflective process also increases our understanding and awareness of the problems of practice. Much of the work of professionals, including that of teachers and principals (Barth, 1981), is not visible to the public, or even to other teachers and principals. Those aspects of work which are revealed, or open to public view, are limited. Belenky, Clinchy, Goldberger and Tarule (1986), for example, discuss the tendency of teachers to hide the "imperfect processes of their thinking," allowing their students to glimpse only the polished products" (p. 215). Typically, problems of practice are among those aspects of professional work which are hidden from view.

Because of the assumption that learning is a lifelong process, that people—and organizations—are engaged in a continual process of improvement, reflective practice brings the discussion of problems into a public forum. While it is assumed that the practitioner can be highly effective in generating solutions to problems, it is also assumed that problems are a normal part of the reality of practice and are often rooted in the system, rather than in personal inadequacies. Within the reflective practice framework, problems are not a stigma nor a sign of failure, but a challenge to seek new and better ways, and to create knowledge. Problems become, not dirty linen to be kept from the public's view, but opportunities for dialogue, learning, and change.

Reflective practice legitimizes discussion of these "imperfect processes." At the classroom level, Sarason (1971), Shor (1980) and Belenky et al. (1986)

found that critically reflective teachers – teachers who make their own thinking public, and therefore subject to discussion – are more likely to have classes that are challenging, interesting, and stimulating for students. At a more abstract level, this type of problem-oriented discussion enriches our knowledge and understanding of the reality of professional practice, and enhances the opportunity for professional growth and for organizational reform. The perception of a problem, or the perceived discrepancy between the reality and the ideal, serves as stimulus for observation, reflection, and, ultimately, the generation of possible solutions. Without a clear understanding of the problem effective solutions are unlikely, and the reflective process engenders understanding.

CARING AND COLLABORATION

As the articulation of craft-knowledge, reflective practice further enhances professional growth and development by facilitating dialogue among practitioners. This dialogue, in turn, establishes a basis for understanding, caring, and cooperation in the workplace.

The process of describing one's own experience increases opportunities for communication and collaboration. The reflective process enables us to share our experiences. When sharing takes place in a public forum, with other like-minded colleagues, the process of communication leads not only to new knowledge but to greater understanding of others as well as understanding of self. Real communication, a sharing of experiences, and the resulting empathy and understanding cannot take place without the self-awareness which comes from reflection. Out of this communication comes understanding and a sense of community, a commonality of purpose despite differences of opinion. "If one can discover the experiential logic behind these ideas [those of the 'other'], the ideas become less strange and the owners of the ideas cease to be strangers. The world becomes warmer and more orderly" (Belenky et al., 1986, p. 115). Through reflection and through communication focused on common professional concerns, the ideas of others become less strange, those others cease to be strangers, and the search for new and better ways of achieving professional goals becomes a public and collaborative process, rather that an isolated and individual effort. This process of sharing ideas and experiences requires the individual to stretch his or her own vision, and "Through mutual stretching and sharing, the group achieves a vision richer than any individual could achieve alone" (Belenky et al. 1986, p. 119).

ORGANIZATIONAL EFFECTIVENESS

Although it is perhaps an oversimplification, reflective practice is a process that requires the application of critical thinking skills to professional problems. Habits of reflection are habits of critical thought. As we have seen, reflective practice enhances professional growth in several ways. Because it requires us to examine the ideas and assumptions which shape our behavior, it leads to a greater self-awareness. By exploring the dynamics of practice, reflection expands the repertoire of strategies available to the practitioner. Because it is designed as a problem-solving technique, reflection increases our understanding of the problems which confront educators on a day-to-day and long term basis and encourages practitioners to design and implement responses to these problems. Because it utilizes personal experience and encourages dialogue, the reflective process establishes the basis for collaboration. All of these outcomes enable the individual practitioner to become more skilled; they also contribute to organizational effectiveness.

Reflective practice allows – in fact, demands – that we "call into question the assumptions underlying our customary, habitual ways of thinking and acting and then be ready to think and act differently on the basis of this critical questioning" (Brookfield, 1987, p. 1). These habits of reflection or critical thinking, and this willingness to question and to scrutinize current ways of doing and thinking as a means of finding new and better ways, are closely linked to organizational effectiveness. Organizational studies in a variety of contexts conclude that the most innovative and productive organizations are those which encourage their members to scrutinize organizational behavior, to challenge existing practices, and to continually look for better ways of doing things (Brookfield, 1987). Kanter's 1983 study, for example, found that most innovative and adaptive companies were distinguished by "the willingness to move beyond received wisdom, to combine ideas from unconnected sources, to embrace change as an opportunity to test limits" (p. 27).

If critical thinking is important for organizations in general, then critical thinking is particularly important for schools. Teaching and administration are tasks that are characterized in organizational literature as ambiguous and unpredictable, and although they share common problems of practice, these problems differ in ways that require unique, tailored-to-fit, responses. Under these conditions of variety, ambiguity, and stress, Lowy, Kelleher, and Finestone (1986) found that the most effective managers were those who were open to information, acknowledged the need to learn on the job, and were constantly seeking ways in which existing practices might be improved.

Reflective practice, then, is viewed as a professional development technique that enhances organizational, as well as individual, performance.

REFLECTIVE PRACTICE: ITS IMPLICATIONS FOR PROFESSIONAL EDUCATION

The common-sense aspects of good ideas often belie their significance. Reflective practice suggests that critical assessment of professional performance is key to becoming a skilled practitioner. This concept also maintains that personal and subjective aspects of professional practice need to be recognized and examined, that learning which is experiential, personal, and collaborative maximizes professional growth, and that learning is a process which is intended to achieve not only knowledge but understanding. In many ways, these ideas are consistent with the most important learning theories that were expounded during the last century. Yet, as the following discussion suggests, the practice of professional education often reflects different and contrasting theoretical perspectives.

A QUALITATIVE APPROACH

By emphasizing the importance of ideas and the subjective aspects of personal experience, reflective practice rejects certain aspects of the scientific tradition and suggests the need to develop new ways of knowing. That ideas influence action is not a new concept. Barbara Ward (1959) identified five ideas that changed the world. Ortiz and Marshall (1988) have traced theories of classical organization to gender discrimination, antagonism between teachers and administrators, and the perpetuation of bureaucratic strategies of organization and control. Effective schools' research has identified vision, expectations, values, and organizational culture as important components of effective leadership, and of effective schools. These findings reflect a growing recognition that qualitative inquiry into the personal and subjective elements of organizational behavior is not only appropriate but essential, if we are to understand administrative processes and improve them. Surprisingly, this approach represents a major conceptual and methodological shift.

Traditionally, behavioral research, including research on school management and reform, has largely ignored ideas, intent, or other subjective aspects of behavior. Social science, in its quest for scientific legitimacy, has modeled itself after the physical sciences and has adopted their criteria of empiricism and objectivism. Education, to establish its own "scientific" validity, has also accepted these standards, and has excluded from its focus "subjective" elements of their human experience.

This strict empiricism is challenged by reflective practice as an inadequate representation of behavior that limits our ability to understand. Musing that "There's something extremely slippery about the concept of behavior," Ossorio (1975), for example, maintains that any description of behavior which fails to address intentions, desires, and feelings is deficient and incomplete. As an alternative to traditional concepts, he conceptualizes behavior not merely as observable actions, but as intentional action – that is, action in which the person engages in order to achieve a specific outcome. Within this model, a successful performance is one in which a person chooses and negotiates a course of action that achieves the intended results.

Reflective practice incorporates this concept of behavior as intentional action, and it emphasizes the necessity to examine those subjective, and often unique, aspects of behavior which distinguish one person from another, and provide a rationale when rational answers fail. To understand behavior, to understand the "artistry" of practice, requires the examination of the unique attitudes, assumptions, and motivations that shape the behavior, as well as the actions, in which the person engages as a chosen means to the goal.

AN EXPERIENTIAL APPROACH

Reflective practice redefines both the concept of learning, and the role of the learner in the learning process. By emphasizing the importance of both personal experience and ideas, reflective practice establishes the importance of theory, but counsels against the study of theory in isolation from practice. Recognizing that the search for knowledge begins with experience and that no learning takes place unless the learner is both involved in and transformed by the learning process, reflective practice also emphasizes that the practitioner is central to the learning process.

The role of the practitioner becomes central to the learning process in another way. The concept of reflective practice assumes that the learning process is purposeful, and that it is a search not merely for knowledge, but for understanding and meaning which lead to change. Through their experience, practitioners have developed knowledge and can therefore play a key role in the construction of new knowledge, and in the development of a knowledge base which can advance professional practice.

Again, these assumptions appear obvious, but, as Kolb explains, "In the overeager embrace of the rational, scientific and technological, our concept of the learning process itself was distorted first by rationalism and later by behaviorism. We lost touch with our own experience as the source of personal learning and development" (1984, p. 2). The impact of this loss can be readily detected in professional education. Professional education too often rejects the lessons of experiential learning and, instead, adopts a didactic model in which responsibility for defining learning objectives remains external to the learner; a model in which the learner is viewed as a passive recipient of information, rather than an active and equal partner in the construction of knowledge; a model which relies on external expertise to the exclusion of personal experience; a model which is individualistic, rather than collaborative. Reflective practice encourages us to recognize again the importance of experience in the learning process.

In their study, *Women's Ways of Knowing*, Belenky et al. (1986) identify progressive stages of knowing. At successive stages, the role of the learner in the learning process changes and the learner begins to use information from a wider variety of sources. At the more primitive stages of knowing, the learner acts as a passive recipient, a vessel into which knowledge is poured, or relies solely on intuition to the exclusion of the experience or knowledge of others. At a more advanced level, called "procedural knowledge," the learner accepts the dictates of the scientific rational model in its perceived need to exclude the personal and the subjective, to detach oneself, and to pursue objective truth in a value-free (and therefore "superior") way. At the most advanced level of knowing, "constructed knowledge," the learner moves beyond the confines of earlier stages and uses both objective and subjective ways of knowing, personal experience, and the experience of others; the learner seeks to achieve understanding, and actively participates in the construction of new knowledge.

Reflective practice, in a sense, encourages us to seek a different and more effective way of knowing, and to become "constructed" knowers. It encourages us, not to disavow procedural knowledge or scientific detachment, but to expand the scope of inquiry, and to expand the sources of information as a means of pursuing professional development. By emphasizing the importance of experience and self, reflective practice encourages constructed knowing. Reflective practice, like constructed knowledge, requires not the exclusion of rationality, but the reintroduction of those aspects of thought and action which have been excluded from conscious attention. Reflective practice and constructed knowledge both maintain the importance of careful, systematic observation and conscious, deliberate and rational analysis. They also incorporate those subjective aspects of experience which have typically been excluded from consideration, and this inclusion enriches rather than dilutes the search for meaning.

Reflective practice also parallels constructed knowledge in its emphasis on the collaborative and collegial nature of learning. Reflective practice begins with the self, but it achieves fruition when reflection leads to communication and collaboration. Reflective practice accepts Kolb's counsel that "The learning process must be reimbued with the texture and feeling of human experiences shared and interpreted through dialogue with one another" (1984, p. 2). In so doing, it becomes a search not merely for expression, but for meaning—a search which takes place not through monologue, but through dialogue and conversation. It begins with the mind but makes room for the heart which, as Robertson Davies' (1985) character Simon Darcourt so elegantly expressed, leads to real understanding.

> Science is the theology of our time, and like the old theology it's a muddle of conflicting assertions. What gripes my gut is that it has such a miserable vocabulary and such a pallid pack of images to offer to us . . . The old priests in his black robe gave us things that seemed to have concrete existence; . . . the new priest in his whitish lab-coat gives you nothing at all except a constantly changing vocabulary which he - because he usually doesn't know any Greek - can't pronounce, and you are expected to trust him implicitly because he knows what you are too dumb to comprehend. It's the most overweening, pompous priesthood mankind has ever endured in all its recorded history, and its lack of symbol and metaphor and its zeal for abstraction drive mankind to a barren land of starved imagination. But you, Maria, speak the old language that strikes upon the heart. You talk (about the Recording Angel and you talk about his lesser angels), and we both know exactly what you mean. (p. 16)

In contrast with a scientific tradition which minimizes the importance of ideas, emotions, and experience, reflective practice emphasizes the value of both experience and reflection. It is a dynamic process that seeks to advance the quality of professional practice. Emphasizing the integral nature of ideas and action, reflective practice seeks not only to expand knowledge, but to achieve meaning and to use that meaning to transform action. Reflective practice recognizes the importance of dialogue for learning, emphasizes the importance of collaborative effort toward common goals, and calls for the learner to be actively involved in the learning process, to become not a passive recipient of information, but a creator of knowledge.

REFLECTIVE PRACTICE: ITS IMPLICATIONS FOR SCHOOLS

Reflective practice has important implications for the preparation and development of professional educators, but its implications are equally important for schools and for educational reform. There are few who would deny that there is a need for major structural reform in schools. Confronted with changing social and demographic conditions, increasing alienation on the part of staff and students, and escalating costs with no commensurate increase in results (particularly for the most vulnerable segments of society), schools must find more effective ways to achieve their goals. Reform is desperately needed, but our experience over the last few decades has shown that traditional approaches to reform are largely ineffective. As Sarason reiterated in 1971, "The more things change, the more they stay the same" (p. 172).

Reflective practice offers an alternative approach to change, one which emphasizes people and ideas. Reflective practice proposes that people can shape organizations. This notion, like other aspects of reflective practice, seems to reflect common sense, yet digresses from the predominant theories-in-use. As Bolman and Deal (1984, p. 237) point out, the proposition that "organizations can be significantly influenced by the theories of their participants" diverges from traditional social science models in which "the significant causal arrow is from the phenomena to the theory," and questions the assumption that "there is an objective reality that exists independent of human theories about it and simply waits for us to understand it."

Reflective practice assumes that two elements are necessary if individuals are to bring about change: reflection and agency. Through reflection, professionals develop ideas about how to do things more effectively, and they transform these ideas into action. Whether or not change occurs depends on whether or not people have ideas, and on whether or not they experience a sense of agency or personal causality that enables them to become actively involved in the change process and to introduce new strategies within the classroom, the school, the district, or the community.

Within this theoretical framework, effective organizations will be those organizations which encourage reflective practice both individually and collectively. Effective organizations will be those which encourage collaborative problem-solving and innovation. When we examine the nature of organizational life in the majority of schools and school districts throughout the country against these two standards, the reality falls short of the ideal.

There is little time or support for reflective practice on the part of individua teachers and administrators, and the environment of the work place i typically not structured to support reflective practice on a school-wide o district-wide basis.

REFLECTION IN SCHOOLS

Reflective practice maintains that the habit of reflection is an important component of effective organizational leadership, and is essential for educational reform.

> When we become critical thinkers we develop an awareness of the assumptions under which we, and others, think and act. We learn to pay attention to the context in which our actions and ideas are generated. We become skeptical of quick fix solutions, of single answers to problems, and of claims of universal truth. We also become open to alternative ways of looking at, and behaving in, the world. When we are critical thinkers within our intimate relationships we learn to see our own actions through the eyes of others. At our workplaces, we seek . . . to take initiative in charting new directions and in designing the form and content of our activities. Without critical thinking our personal relationships become atrophied, our workplaces remain organized as they were twenty years ago, and our political involvements dwindle to the point of total nonparticipation. (Brookfield, 1987, pp. x, 1)

Yet, despite the recognition that reflective practice, or critical thinking in Brookfield's terms, is important for individual and organizational growth, schools have been negligent in their efforts to nurture and support critical thinking. Citing Peters and Waterman (1982) among others, Brookfield concluded that "Workplaces in which innovation, creativity, and flexibility are evident are workplaces in which critical thinkers are prized" (1987, p. 139). In schools, however, the reverse is often the case. Critical thinkers are often not prized, and innovation, creativity, and flexibility are not evident. Schools typically do not reward or encourage critical thinking, nor do they establish conditions that enhance critical thinking, reflective practice, or professional growth. Those who rise to the top tend to be those who "don't blot the copy"; critical thinkers are categorized, not as desirables, but as troublemakers.

If schools have been negligent in providing work environments that nurture and develop these important skills, then professional education has also been negligent. There has been a growing emphasis on the need to develop the thinking skills of elementary and secondary students. Yet, ironically, and perhaps in response to practitioners' demands for "relevant" education, the importance of critical thinking skills for teachers and school administrators has not received as much attention.

Reflective practice assumes that learning is a lifelong process and that artistry is a standard of performance far beyond basic competence. In theory, we espouse these assumptions; yet, in practice, we act as if the need for continued learning reflects incompetence. Our actions imply that there should be no need for continued learning, that the acceptance of employment assumes a skilled performance. We espouse the view that one becomes a skilled practitioner through an ongoing process of experience, reflection, and experimentation, but our actions contradict our words. We espouse the importance of staff development while cherishing the notion that "good teachers are born not made". We give lip service to the need for staff development, yet staff development services – and budgets – are frequently low priorities. We reward those who are apparently successful and we reject those who admit to problems and ask for help, whether these people are teachers with discipline problems or principals in schools with low test scores.

Reflective practice assumes that problems are opportunities that support professional growth and enhance organizational effectiveness. In contrast, perhaps in response to continued external review and criticism, schools tend to engage in a conspiracy of silence. There is little open discussion of problems, and only a few instances of collaborative problem-solving efforts. Rather than being workplaces which encourage the risk-free discussion of problems, schools are too often environments in which problems are denied and hidden. Rather than rewarding those willing to identify and grapple with problems, the system seems to look more favorably on those who "don't rock the boat." Instead of recognizing that so many of the important problems confronted by schools are shaped by social reality, we continue to view problems as individual deficiencies.

These patterns of organizational behavior are not exclusive to schools. Belenky et al.'s examination of women's experience in higher education suggests that the university classroom does not always support the development of reflective skills. Their study shows that in many instances the learning process has become a game in which words are used to batter rather than to encourage, a game which the authors trace to the emphasis on scientific rationality and the perceived need to pursue truth in an impersonal and value-free way. In this "doubting game," the objective is to criticize; to discover the flaws; to look, not for a better way of doing things, but for something wrong – "a loophole, a factual error, a logical contradiction, the omission of contrary evidence" (Belenky et al., 1986, p. 104). In this environment, revealing problems or imperfections is as risky as it is within the school workplace.

If organizations, schools, and universities want to foster reflective practice in the workplace or the classroom, they must create an atmosphere that values communication, participation, and the ability to openly discuss problems without fear of embarrassment or retribution. They must focus their efforts on finding ways to make things work, rather than on trying to find a list of reasons why things would not work. Whether or not this type of environment develops depends to a certain extent on structural characteristics. Two characteristics associated with critical thinking and innovation are decentralization and horizontal communication (Brookfield, 1987). Current efforts to reform decision-processes by involving more members of the school community—teachers, administrators, and community members—are positive signs. Yet, a great deal remains to be done to modify the predominant organizational model which is characterized by highly centralized decision-making processes and a predominantly vertical pattern of communication which restricts both the quality and quantity of information distributed throughout the organization.

As a basis for change, schools must become organizations which support reflection, and which enable people to examine ideas and actions openly, critically, and collaboratively. If schools are to change, theories-of-action must change.

AGENCY IN SCHOOLS

Reflective practice emphasizes not only ideas, but the transformation of these ideas into action. If vision and ideas distinguish effective leaders, so does their ability to translate these ideas into action. Schön's concept of reflective practice incorporates a view of human motivation which assumes that individuals want to become more effective, and that they naturally strive to improve their performance (Argyris & Schön, 1974). Through this search to master themselves and their environment, individuals ultimately determine whether organizations will be effective. Effective leaders are agents of change. They disregard the system, they break the rules, and their behavior is shaped by a unique vision. Like Don Quixote, they dare to dream, but their tilting at the windmills of bureaucratic decay and inefficiency is more informed and more successful than that of the legendary Quixote. Nonetheless, these visionaries, these agents of change, tend to be the exception rather than the rule, in a system which can't seem to figure out how to cut through its own red tape to make things work.

If change is to occur, organizations must enable their members to be active participants in the organizational process. Unfortunately, there is evidence that this basic pre-condition is absent. Erickson's comment in 1972 that administrative powerlessness is one of the most pervasive realities of organizational life is still valid. Although the aggressive stance of some teachers in seeking empowerment may be viewed as a rejection of powerlessness and a desire to exercise causality, symptoms of powerlessness – low morale, lack of innovation and creativity, alienation, and depression – persist among teachers, administrators, and students. Whether or not change occurs depends as much on preconceived notions about what is possible and permissible as on the reality. This pervasive belief that individuals are powerless to change the "system" undermines the possibility of change. Unless schools can reverse these attitudes and create conditions that engender a sense of efficacy, no change will occur.

What can schools do to reverse this trend? How can they encourage reflection and agency among teachers and administrators? At a very basic level, they must become organizations which place people's needs first. Argyris & Schön commented that the "ineffectiveness, costliness, and deteriorating quality of products and services were found to be based on the fact that organizations were designed originally to ignore human nature, to ignore individuals' feelings and most of their abilities, and to exploit them" (1974, p. xi). The subordination of the individual to the system and the failure to recognize personal needs fosters alienation, powerlessness, and detachment. John MacMurray's (1961) metaphor of the spectator is particularly appropriate for describing the behavioral and attitudinal impact of this depersonalization:

> Social history is a drama which unrolls itself before him, and which he watches and understands. But he also has a part to play upon the stage. In his public capacity a role is assigned to him, and it is his task to play his role properly; and he can only do this by suppressing his own self-expression and acting in the way that the author of the drama intended the part to be played. He must identify himself with his role - his station and its duties - and suppresses his impulse to be himself. He can be himself only as a spectator, not as an actor. (p. 142)

Schön's concept of reflective practice assumes that change depends on agency, personal causality, leadership, and responsibility. An organizational environment which encourages and rewards reflective practice is an organization which supports agency, and is an organization which enables individuals to act rather than to react.

Reflective practice fosters self-actualization and engenders a sense of empowerment. Assuming that the system can change and that the practitioner's efforts at personal improvement will ultimately determine organizational effectiveness, the reflective process enhances the sense of self-control and engages the person in system change. Belenky et al. (1986) discussed how the opportunity to develop one's own voice – and to be heard – enables one to play a different role, to begin to construct reality, and to become an actor rather than a spectator. Brookfield, too, comments on the associations among critical thinking, empowerment, and active involvement in the change process: "When we think critically, we come to our judgments, choices and decision for ourselves, instead of letting others do this on our behalf. We refuse to relinquish the responsibility for making the choices that determine our individual and collective futures to those who presume to know what is in our own best interests. We become actively engaged in creating our personal and social worlds" (1987, p. x).

Effective leadership requires an environment that values reflective practice and critical thought; it requires an environment that makes it possible for people to transform ideas into actions. If change is to occur, schools, as workplaces must be redesigned. They must become organizations that enhance personal and professional growth. They must become organizations that foster communication, habits of reflection and critical thought, and a continuing commitment to improvement on an individual and collective basis. They must become organizations that enable individuals to transform new ideas into action. They must become organizations in which every member is expected to be a leader.

An organization which encourages reflective practice, establishes an atmosphere of open communication, and rewards efforts to address problems, is also an organization which recognizes the importance of understanding, empathy, and collaboration. In an atmosphere of caring and collaboration, individuals are less likely "to suppress themselves," and are more likely to dedicate their efforts to improving their own performance and the performance of the organization as a whole.

Reflective practice challenges professional educators, whether they are academicians or practitioners, to develop their own skills in reflective practice and to create an environment in which concerned constituents – teachers, administrators, and citizens – can work together to address the problems of schools. Reflective practice asks us to give up the "doubting game" and begin playing the "believing game" (Belenky et al., 1986, p. 113), and asks us to try to understand, to share ideas, and to use this collective knowledge and experience to discover new ways to make schools work better.

CONCLUSIONS

Reflective practice symbolizes dramatic changes in our ways of thinking, and poses challenges to those whose actions influence the quality of education – academicians, practitioners, administrators, teachers, parents and legislators.

Reflective practice challenges professional education to broaden its perspective and to revise its goals and methods. Emphasizing the importance of theory and ideas, experience and reflection, and the purposeful pursuit of knowledge, reflective practice challenges artificial distinctions and status differentials between theory and practice, intellect and emotions, academicians and practitioner. Reflective practice also recognizes and addresses the need for communication and collaboration.

Emphasizing the importance of the person as a key component in organizational change, reflective practice challenges educators to become personally and actively involved in the creation of better schools. It challenges them to examine the ideas which shape schools and to actively engage in reconstructing that reality. Without restructuring the underlying mindscapes, restructuring of schools will not occur.

However, if members of the educational community are to participate in the change process, and participate in the task of redesigning schools their efforts must be encouraged and supported. Accordingly, reflective practice challenges educational institutions to establish a learning environment in which educators can develop and utilize those skills, those habits of reflection and agency, which are so critical to continuing professional growth and organizational change.

Argyris and Schön proposed that organizations will be more likely to begin to "decrease the movement toward entropy and increase the forces toward learning and health" when they adopt "a theory of action which enhances human activity, responsibility, self-actualization, learning and effectiveness" (1974, p. xi). If schools are to change, they must first and foremost become workplaces that respond to human needs, and workplaces that support professional growth and enable educators to act as reflective practitioners. In becoming organizations which foster professional growth and development, schools will become more effective.

GEORGEA MOHLMAN SPARKS-LANGER AND AMY BERSTEIN COLTON

Reprinted with permission from Educational Leadership, March 1991.

Synthesis of Research on Teachers' Reflective Thinking

The value of teachers' own interpretations of their work now supplements technical views of teaching, and researchers are exploring three elements of reflection—cognition, critical thinking, and narrative inquiry undertaken by teachers themselves.

Reflective thinking is not a new idea—Dewey (1933) referred to it in his early works—but only a handful of researchers and practitioners were using the term until Schon (1983, 1987) began to write about reflective practice in education and other professions. Now, those who have always believed in the importance of the critical and analytical thinking of teachers are rallying around the idea.

This shift toward an interest in reflective thinking has come about partly as a reaction to the overly technical and simplistic view of teaching that dominated the 1980s. Gradually, however, experts in supervision, staff development, and teacher education have begun to recognize that teaching is a complex, situation-specific, and dilemma-ridden endeavor. Recently they have begun to study teachers' values and philosophies in the face of their everyday dilemmas. Today, professional knowledge is seen as coming both from sources outside the teacher and from the teachers' own interpretations of their everyday experiences.

It is difficult to pin down the exact meaning of the term *reflection*. Most who use the term would probably agree that the opposite of reflective action is the mindless following of unexamined practices or principles. But within that agreement, there is quite a range of opinion regarding what reflection is and what it looks like in action.

This article presents three elements that are important in teachers' reflective thinking. The first is the cognitive element, which describes how teachers process information and make decisions. The second, the critical element, focuses on the substance that drives the thinking—experiences, goals, values, and social implications. The final element of reflection, teachers' narratives, refers to teachers' own interpretations of the events that occur within their particular contexts.

The Cognitive Element of Reflection

The cognitive part of teacher reflection focuses on how teachers use knowledge in their planning and decision making. Shulman (1987) has described six categories of knowledge: (1) content/subject-matter knowledge; (2) pedagogical methods and theory; (3) curriculum; (4) characteristics of learners; (5) teaching contexts, and (6) educational purposes, ends, and aims. Shulman's idea of "pedagogical content knowledge," which encompasses the first three categories, refers to how teachers portray important ideas specific to their content. These representations (or metaphors) enable the teacher to convey complex ideas in ways that bring meaning to students.

Most cognitive researchers have not delved deeply into how teachers think about the last two categories of the knowledge base: teaching contexts and educational purposes, ends, and aims. They usually stick with what Van Manen (1977) calls the *technical* level of reflection, where the ethical and moral purposes of education remain unexamined.

Another focus of cognitive research is how the knowledge base is organized. One current model depicts information as organized into a network of related facts, concepts, generalizations, and experiences. These organized structures, called *schemata*, constitute the individual's comprehension of the world and allow a large body of information to be stored and accessed very rapidly (Anderson 1984, Berliner 1986). Comparisons of novice and expert teachers' interpretations of classroom events indicate that experts have deeper, richly connected schemata to draw upon when making a decision. In contrast, novices tend to have leaner, less developed schemata, presumably because of lack of experience (Leinhardt and Greeno 1986).

For example, Carter and her colleagues (1988) studied how experts, novices, and aspiring teachers perceive visual information about classrooms. She observed that experts were "better able to weigh the import of one piece of visual information against another, to form connections among pieces of information, and to represent management and instructional situations into meaningful problem units" (p. 25). This ability was attributed to the more elaborate, complex, and interconnected schemata of the experts. These schemata first help determine which events merit attention and, second, trigger other relevant information from memory so the teacher can determine an appropriate response.

A key factor in the thinking of experts appears to be "automaticity." Certain routines (sequences of responses) are automatically stimulated by a situation and put into action with little conscious attention by the teacher. This enables the teacher to perform some behaviors unconsciously while attending to those events that are more novel or important (Carter et al. 1988). These automatic scripts for action are probably stored as schemata.

Borko and Livingston (1989) compared the planning, teaching, and post-lesson reflections of novice and expert teachers in their program at the University of Maryland. During the act of teaching, the novices encountered problems when attempts to be responsive to students led them away from scripted lesson plans. They appeared unable to hook back into their schema for the lesson and had to re-create a meaningful plan on the spot—an unnerving process when more than 20 students are waiting expectantly for the teacher to "get his act together." In contrast to the novices, experts were able to improvise quite naturally from sketchy plans, probably because (1) many of the routines and the content were available in memory as automatic scripts and (2) their rich schemata allowed the experts to quickly consider cues in the environment and access appropriate strategies.

> **Schemata do not automatically appear in a teacher's mind; they are constructed through experience.**

Schemata do not automatically appear in a teacher's mind; they are constructed through experience. Constructivist theory (Greeno et al. 1979) indicates that individuals are constantly creating their own meaning out of what is perceived. This is a dual process of assimilation (fitting the new in with the old) and accommodation (changing the old mental organization to incorporate the new) (Piaget 1978). Therefore, the experiences, values, and beliefs stored in memory certainly have influence on how a new piece of information is perceived and interpreted. Such "culturally based filters" have been investigated by Hollingsworth (1990) and others (Ross 1990), with the result that teacher educators are now giving more attention to how preconceptions about the aims of education can influence what college students do (and do not!) learn from teacher education programs.

Lampert and Clark (1990) believe schema theory may give too little importance to context factors. They refer to "situated cognition," which suggests that knowledge is constructed through interaction between the mind and the context surrounding the problem. Thus, rather than apply a generalized schema (learned rules, principles, or concepts) to a problem, teachers may make a case-by-case response to the particulars of a problem. If this is accurate, then greater opportunities need to be provided for future teachers to "anchor" their knowledge and experience in rich educational contexts.

A third topic investigated by cognitive researchers is teachers' metacognition—self-regulated, purpose-driven behavior. The reflective teacher monitors the effect of an action taken as well as the cognitive processes employed to make decisions. These cognitive processes involve making inferences, or tentative hypotheses. Dewey (1933) observed wisely that it is not our belief in inferences that misleads us, but our belief in *untested* inferences. Upon encountering a novel situation, a teacher attends to it, makes inferences, and then mentally tests them by looking for similarities and differences apparent in this situation and comparing them with events and ideas (schemata) stored in memory. Expert/novice studies by Leinhardt and Greeno (1986) indicate that experts engage in such self-regulated, purpose-driven behavior more than do novices.

Research on Promoting Cognitive Reflection

The studies summarized above contrasted novices with experts. More recent studies purport simply to identify teacher education activities that promote reflective thought. One example is CITE (Collaboration for the Improvement of Teacher Education), part of a four-year undergraduate program at Eastern Michigan University (EMU) (Sparks-Langer et al. 1990). Structured field experiences, micro-teaching, one week of classroom teaching, journals, and writing assignments help pre-student-teachers analyze, question, and reflect on the issues presented in courses. Professors model reflective questioning and discourse through textbook selections[1], teaching methods, and class assignments.

The evaluations of CITE have produced a framework for assessing the reflective thinking displayed during a short interview about a recent teaching event (Simmons et al. 1989). The framework has seven levels: (1) no description; (2) simple, lay person description; (3) labeling of events with pedagogical concepts; (4) explanation using only tradition or personal preference; (5) explanation using pedagogical principles; (6) explanation using pedagogical principles and context; and (7) explanation with ethical/moral considerations. The progression of levels shows a growing sophistication in teachers' schemata, from technical concepts and rules to contextual and ethical thinking.

In the studies reported below, the research team coded transcripts of all interviews and achieved satisfactory reliability. Of the 16 *average* and *above average* (rating made by professors) CITE students studied at the end of the program, 10 were functioning at level 6, contextual thinking. Of the eight *below average* students, only one was able to function at this level.

In another study of CITE, Grinberg (1989) contrasted a class of CITE students with a similar group not enrolled in CITE. While both groups were initially equal on the reflective thinking scores and other factors the CITE students subsequently achieved significantly higher ratings on their reflective thinking. The courses with guided field experiences apparently promoted greater reflection than did the courses without the field experiences.

In a study of the reflective thinking produced by an inservice program, Pasch and his colleagues (1990) used the CITE framework to evaluate teachers who were studying the ideas of Madeline Hunter. Interviews were conducted before training, after training but before coaching, and after both training *and* coaching. There was no difference between the pre-training and post-training reflective thinking scores; after coaching, however, these scores rose significantly, with a mean score of 5.1 (explanation using pedagogical principles). Thus, coaching may help to promote reflection.

Dewey observed wisely that it is not our belief in inferences that misleads us, but our belief in *untested* inferences.

Morine-Dershimer (1989) examined the development of knowledge about teaching associated with a secondary-level methods course that included extensive micro-teaching. At the beginning and the end of the course, students were asked to construct concept maps representing their views of teacher planning. There was a strong increase in the number of main categories used in the maps and a slight increase in the number of levels of subordinate concepts used in the main categories. Thus, the course activities seemed effective in developing richer conceptual networks (schemata), more like those of experts.

Finally, Hollingsworth (1990) conducted a longitudinal study to investigate changes in the knowledge and beliefs of 10 teachers about reading instruction before, during, and after a fifth-year teacher education program. She hoped that the program would help teachers shift attention away from technical concerns with student activities and toward a greater interest in student learning. She found little change until the second or third year of teaching, which, she believes, is when the scripts for the everyday management and activities became automatic, allowing the teachers to focus on student outcomes.

Summary of Research on Cognitive Reflection

One conclusion drawn from the cognitive research is that we should teach novices the schemata of experts. But acting on this conclusion could subvert the lessons learned from constructivism (each of us must construct our own meaning) and from "situated cognition" (expert teachers probably draw on their own contextually developed knowledge and prior case-experience to develop their own wisdom of practice.) It would also, perhaps, short-circuit the development of professional self-regulated judgement. Research can inform us about how complex and uncertain teaching is, but it "cannot describe the sorts of decisions teachers should be taught to make in any particular situation" (Lampert and Clark 1990, p. 29).

In critical reflection, the moral and ethical aspects of social compassion and justice are considered along with the means and the ends.

The Critical Element of Reflection

While the cognitive element of reflection emphasizes how teachers make decisions, the critical approach stresses the substance that drives the thinking—the experiences, beliefs, sociopolitical values, and goals of teachers. Critical reflection is often contrasted with what Van Manen (1977) refers to as technical reflection, where the teacher considers the best means to reach an unexamined end. For example, a teacher may choose a particular room arrangement to maintain control, without consideration of the other possible effects. In critical reflection, the moral and ethical aspects of social compassion and justice are considered along with the means and the ends. For instance, the teacher may choose a seating arrangement that facilitates cooperative learning in the hope of fostering a more equitable, accepting society.

To understand critical reflection, it is important to look at two orientations to reflective thinking, Schon's concept of reflective action (1983, 1987) and critical theory (McLaren 1989, Tom 1985). Both have highlighted the importance of teachers' thinking about the dilemmas of teaching and the social outcomes of education.

Schon (1983) first analyzed the work of architects and other professionals to see how they reflected on their actions. Surprisingly, he found little emphasis on traditional problem solving. Instead of using a rational process of selecting the best solution for an agreed-upon goal, these professionals engaged in an open debate about the nature of the decisions, the value of the goals, and the ultimate implications of the actions. Schon referred to this reflective dialog as *problem setting*. Among teachers (and others) he also found artistic comfort with ambiguity, no-one-right-answer thinking, and recognition of the nonlinear, uncertain complexity of professional practice.

Schon does not refer to a cognitive knowledge base for teaching: rather, he refers to an "appreciation system."

Schon (1987) believes that while teachers acquire some professional knowledge from "packaged" educational principles and skills, the bulk of their learning comes through continuous action and reflection on everyday problems. Further, he contends that the information gained from this experience is often tacit and difficult to analyze. Schon does not refer to a cognitive knowledge base for teaching; rather, he refers to an "appreciation system." This system contains the teacher's repertoire of theories, practices, knowledge, and values, which influence how situations are defined, what is noticed, and the kinds of questions and decisions teachers will form about particular actions.

Many who use the term *teacher reflection* (for example, Smyth 1989) think of it in terms of critical theory. McLaren (1989) observed that "critical pedagogy attempts to provide teachers and researchers with a better means of understanding the role that schools actually play within a race-, class-, and gender-divided society" (p. 163). When teacher educators help teachers examine the issues of ethics, morals, and justice in education, they are opening up discourse about the role of schools in a democratic society. Teachers then begin to question common practices such as tracking, ability grouping, competitive grading, and behavioral control. They begin to clarify their own beliefs about the purposes of education and to critically examine teaching methods and materials to look for the hidden lessons about equity and power that might lie therein. We see in critical pedagogy, as in Schon's work, a reaction against an antiseptic, value-free, purely rational view of teaching and learning.

Critical theorists see knowledge as socially constructed, that is, constructed symbolically by the mind through social interaction with others. This knowledge is determined by the surrounding culture, context, customs, and historical era (McLaren 1989). In contrast to cognitive constructivism, this approach places more importance on life values and morals, for example, concepts of justice, ideas about the purpose of the individual in a democracy, ethics related to the treatment of students, and so on. All of these are heavily dependent on the social milieu in which the teacher develops.

When teachers examine the issues of ethics, morals, and justice in education, they are opening up discourse about the role of schools in a democratic society.

What are the thinking processes of a critical reflective practitioner? To (over)simplify, as teachers describe, analyze, and make inferences about classroom events, they are creating their own pedagogical principles. These "short-range theories" (Smyth 1989) help make sense of what is going on and guide further action. Ross (1990) has extended the ideas of Schon, Van Manen, and others into five components of reflective thinking: (1) recognizing an educational dilemma, (2) responding to a dilemma by recognizing both the similarities to other situations and the special qualities of the particular situation, (3) framing and reframing the dilemma, (4) experimenting with the dilemma to discover the consequences and implications of various solutions, (5) examining the intended and unintended consequences of an implemented solution and evaluating the solution by determining whether the consequences are desirable or not (p. 22).

The first three of these items echo Schon's process of problem framing. The fourth and fifth bring us to a key thinking process in critical pedagogy (McLaren 1989)—the examination of the relationship between power and knowledge. Knowledge should be examined "for the way it misrepresents or marginalizes particular views of the world" (p. 183). That is, many accepted explanations are biased in favor of the group in power at the time when the ideas were formed. Teachers, then, need to convey the concept of teaching and learning as a process of inquiry into the problematic by asking questions such as *If we use this process or content, what is the long-term effect on* *students' values, and thus on society?* Through such questions emerges a "language of hope" for bringing about greater social equity.

Research on Promoting Critical Reflection

Teacher education programs at universities are addressing the goal of critical reflection (only a few will be summarized here). Most program designers have found that it is relatively easy to promote technical and practical reflection and more difficult to achieve critical reflection. Ross (1989) evaluated the effects of a course in Research on Elementary Education as part of a five-year teacher preparation program (PROTEACH). The professor fostered reflection by helping students examine their own socially constructed beliefs about schools and teaching. For example, she required action research projects and "theory-to-practice" papers from students. She also used research-based teaching techniques and critical discussions of students' learning from those methods.

To assess students' thinking, Ross assigned each of 134 theory-to-practice papers a level of reflection, from *1* (low: description with little analysis of context or multiple perspectives) to *3* (high: multiple perspectives with recognition of pervasive impact of teachers' actions). Most papers were rated *1* or *2*. Ross interpreted these findings in a developmental light: "perhaps, even though students demonstrated a low or moderate level of reflection, the development of this knowledge is essential for future reflection" (p. 29).

After several studies of the PROTEACH program, Ross and her colleagues (in press) believe that "change in perspective" is the basis of the development of reflective practice. Future teachers are led to construct their own perspectives by drawing on their past and present personal and professional experiences in schools; theoretical knowledge base; self-image and efficacy; and their interactions with peers, mentors, supervisors, and children in school. Such multidimensional perspectives are probably built gradually through extensive reflective dialogs that help teachers comprehend both the immediate and the long-term ethical and moral aspects of their work.

In the CITE evaluation studies referred to earlier (Sparks-Langer et al. 1990), most students were using principles and contextual clues to make sense of their experiences. Yet, few students displayed level-7 (ethical/moral) thinking, probably because at that point, the program did not have a coherent, critical-theorist orientation in the social foundations courses. (As the critical perspective has been integrated more thoroughly, we are beginning to see more evidence of such thinking in our students.)

In critical pedagogy, we see a reaction against an antiseptic, value-free, purely rational view of teaching and learning.

At Catholic University, Ciriello, Valli, and Taylor (in press) have designed a teacher preparation program around the concept of critical reflection. The program includes professors' modeling their own thinking processes, students' self-critiques of assignments, action research, and journal writing. Students' responses to questionnaires indicated that action research helped them to value both the context of teaching and systematic thinking about complex phonomena. Further, students expanded their vision of teaching to include moral responsibility and the need to challenge taken-for-granted practices.

Summary of Research on Critical Reflection

The programs studied have been quite successful in identifying methods that promote technical reflection about methods, principles, outcomes, and contexts for pupil learning. They have had limited success in promoting critical reflection. However, they have contributed much by proposing frameworks that describe types of reflective thinking (for example, Ross 1990, Sparks-Langer et al. 1990) and through providing several techniques for developing reflective thought. These techniques include structured journal writing, critical dialog, examination of multiple perspectives, field experiences, and action research. In spite of this progress, we are not completely clear on how one best promotes or assesses teacher reflection about political, ethical, and moral values, beliefs, and attitudes.

Another difficulty in studying the development of critical reflection arises from the mismatch of research paradigms. Concrete cognitive models have often been used to assess what is essentially a dilemma-ridden, uncertain, changeable thing—teachers' thinking. We at EMU have concluded that our level-7 (ethical/moral) thinking is not necessarily an endpoint on a continuum but rather a separate phenomenon that must be studied with in-depth qualitative and interpretive methods. The next approach to reflection—teachers' narratives—illustrates this view.

Teachers' Narratives: The Third Element of Reflection

Cochran-Smith and Lytle (1990), writing about teacher research, contended, "what is missing from the knowledge base of teaching, therefore, are the voices of the teachers themselves, the questions teachers ask, the ways teachers use writing and intentional talk in their work lives, and the interpretive frames teachers use to understand and improve their own classroom practices" (p. 2). This is the essence of the narrative part of reflection. While a teacher's narrative may include cognitive or critical aspects, the emphasis is on the teacher's own interpretations of the *context* in which professional decisions are made. Such narratives can be a powerful force in heightening teachers' awareness of their own professional reasoning.

Many terms and concepts are joined together in this view of reflection: case studies of the tacit wisdom that guides practice (Shulman 1987), the inclusion of craft knowledge in teacher assessment practices (Leinhardt 1990), the legitimacy of viewing teaching as art (Eisner 1982, Kagan 1988), defining teaching as improvisational performance (Yinger 1987), teacher action research (Cochran-Smith and Lytle 1990), and the appearance of qualitative studies using narrative inquiry (Connelly and Clandinin 1990). The common thread through all these is the emphasis on the validity of teachers' judgments drawn from their own experiences. This view is sympathetic with Schon's notion of "giving reason" because it is the teachers themselves whose voices comprise the story.

Here we describe in greater detail only two of the many ideas listed above: narrative stories and the artistic/aesthetic view of teaching. Connelly and Clandinin (1990) suggest that humans are essentially storytelling organisms. Thus, stories written by and about teachers form the basis of narrative inquiry. The participants in such inquiry construct and reconstruct narrative plots to gain a deeper understanding of their experience. In this view, therefore, the process of reflective thinking is seen as narratives or stories, with settings, plots, and characters.

Stories written by and about teachers form the basis of narrative inquiry.

Kagan (1988), writing from the artistic/aesthetic tradition, concludes that the cognitive-schemata model of teachers' thinking is so patterned, sensitive to environment, and flexible that teaching could be easily viewed as an act of artistic composition. She cites Eisner's (1982) reminder that the term *context* comes from the Latin *contexere*, to weave together. Thus, as a teacher works through the hierarchical planning net, a weaving together of meaning is created. This view of teaching as artistry echos Yinger's (1987) notion of teaching as improvisational performance. A teacher may begin with broad guidelines for a lesson, but the actual teaching moves are artfully improvised in response to the students and the context.

In narrative inquiry, the participants construct and reconstruct narrative plots to gain a deeper understanding of their experience.

Research on Promoting Narrative Reflection

A common theme in the narrative element of reflection is the emphasis on *naturalistic* studies. In contrast to experimental and quantitative studies that manipulate factors in order to produce generalizations, naturalistic studies explore the meanings and interpretations teachers give to their everyday lives. As educational researchers recognize the complexity of teaching and of learning to teach, more and more studies are turning to such qualitative methods.

Action research (Elliott 1985) can be a powerful vehicle for encouraging teachers to tell their own stories. In such research, a teacher identifies questions, plans actions, and collects information about the phenomenon under study. An example of this approach is Lampert's (1990) three-year study of her own teaching of 5th grade math. Her goal was to "make knowing mathematics in the classroom more like knowing mathematics in the discipline" (p. 59). Lampert presented her research "in terms of a story about learning and knowing mathematics in the social setting of the classroom" (p. 33). Her study of her own teaching and her students' learning prompted her to conclude that, though her students met her goals, there was still much to learn.

Another example of action research is provided by Colton and others (1989). As part of the CITE project, a small group of teachers and professors met for six half-days to explore the notion of teacher reflection and to conduct inquiry into their own practice. One teacher's journal (Morris-Curtin 1990) and final reflections provide a vivid story of the benefits:

> I think the most notable change for me was the ability to start backing away from the need to get an immediate solution to a problem. Instead, by using the problem solving/reflective framing format, I really feel like I'm giving the wealth of knowledge I possess about my profession a chance to come more fully into play. . . . There is something magical and very personal in all of this. Like finally finding just the right word for a poem you've worked on for ages. Teaching, like any other art form, comes from a special place within us (p. 5).

Using collaborative action research methods (Oja 1989), Canning (1990), engaged student teachers in describing and analyzing their own efforts to become reflective. In addition to writing about the experiences occurring around them, student teachers also considered themselves as objects of reflection. By providing questions, supportive feedback, and affirmations, Canning helped students find their "own voices" as they engaged in open-minded, responsible, and wholehearted reflection on their student teaching experiences.

Summary of Research on Narrative Reflection

Three major benefits are realized from teachers' narratives. First, these studies give us insights into what motivates a teacher's actions and an appreciation for the complexity of teachers' everyday lives. Second, teachers' narratives provide us many detailed cases of teaching dilemmas and events (for instance, Shulman and Colbert 1987).

Highlights of Research on Teachers' Reflective Thinking

Several implications can be derived from this review of research on teachers' reflective thinking:

★ Teacher educators can foster growth in cognitive reflection through microteaching with post-teaching reflection journals, teaching with self-analysis of video/audiotapes, action research observation and analysis of selected teaching episodes, coaching, and assessment and discussion of student learning.

★ Critical reflection may be promoted through close examination of cases that illustrate particular aspects of context, pedagogy, content, ethical/moral dilemmas, and other elements of teaching and learning that will help teachers develop a rich, flexible repertoire of ideas, attitudes, and skills.

★ Teachers need opportunities to construct their own narrative context-based meaning from information provided by research, theoretical frameworks, or outside experts.

★ A person's preconceptions of teaching, learning, and the purposes of schooling will influence greatly how he or she interprets courses, workshops, and personal teaching experiences. These beliefs must be examined critically from various perspectives to allow for a flexible and thoughtful approach to teaching.

★ Future research needs to explore how teachers interpret, give meaning to, and make decisions about their experiences in schools. Teachers themselves will need to be included as co-investigators in such research.

—Georgea Mohlman Sparks-Langer and Amy Berstein Colton

Richert (in press) has used such cases successfully to develop reflective thinking in teachers. The third, and most valuable benefit is the insight gained by teachers themselves as a result of this self-inquiry.

In one sense, the emphasis on critical and narrative teacher reflection is a bridge into a new way of thinking about research on teaching. Since many researchers who study the process of learning to teach were trained in the experimental and quantitative research tradition, this can be a tough leap. Yet, as we have seen here, researchers have forged collaborations with teachers and are truly listening and learning from their stories (for example, Huberman 1990).

Much to Learn

In this review, we have described three aspects of reflection important to teachers' professional thinking. Most researchers in teacher education now recognize the important role of context, case-knowledge, deliberation of educational aims/ends, prior beliefs, wisdom-through-action, and cognitive complexity in teachers' reflective thinking.

As we fit together the cognitive, critical, and narrative elements of teachers' reflective thinking, we find that we are moved to "reframe" our images of teacher education and supervision. No longer is direct teaching or "training" necessarily the best mode for professional staff development. University course work and unstructured student teaching experiences are inadequate. Certainly, first-year teachers are woefully without the support that would allow them to move out of novice-like practice. We hope the ideas presented here provide guideposts that can help us design developmentally appropriate growth experiences for teachers at all levels and that we continue this journey with teachers as co-inquirers into the mysterious process of reflective professional thinking.☐

[1] The textbook, *Teaching as Decision Making*, was written by five faculty in the CITE program at EMU: Pasch, Sparks-Langer, Gardner, Starko, and Moody. It promotes a practical, reflective orientation to methods of teaching and is published by Longman.

References

Anderson, R.C. (1984). "Some Reflections on the Acquisition of Knowledge." *Educational Researcher* 13: 5–10.

Berliner, D.C. (1986). "In Pursuit of the Expert Pedagogue." *Educational Researcher* 15, 7: 5–13.

Borko, H., and C. Livingston. (1989). "Cognition and Improvisation: Differences in Mathematics Instruction by Expert and Novice Teachers." *American Educational Research Journal* 26, 4: 473–498.

Canning, C. (1990). "Reflection: Out on a Limb. An Intrapersonal Process and the Development of Voice." Paper presented at the annual meeting of the American Educational Research Association, Boston, Mass.

Carter, K., K. Cushing, D. Sabers, P. Stein, and D. Berliner. (1988). "Expert-Novice Differences in Perceiving and Processing Visual Classroom Information." *Journal of Teacher Education* 39, 3: 25–31.

Ciriello, M.J., L. Valli, and N.E. Taylor. (in press). In *Reflective Teacher Education Programs*, edited by L. Valli. New York: Teachers College Press.

Cochran-Smith, M., and S.L. Lytle. (1990). "Research on Teaching and Teacher Research: The Issues that Divide." *Educational Researcher* 19, 2: 2–11.

Colton, A.B., G.M. Sparks-Langer, K. Tripp-Opple, and J.M. Simmons. (1989). "Collaborative Inquiry into Developing Reflective Pedagogical Thinking." *Action In Teacher Education* 11, 3: 44–52.

Connelly, F.M., and D.J. Clandinin. (1990). "Stories of Experience and Narrative Inquiry." *Educational Researcher* 19, 4: 2–14.

Dewey, J. (1933). *How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process*. Chicago, Ill.: D.C. Heath.

Eisner, E.W. (1982). "An Artistic Approach to Supervision." In *Supervision of Teaching* (ASCD 1982 Yearbook, pp. 53–66), edited by T.J. Sergiovanni. Alexandria, Va.: Association for Supervision and Curriculum Development.

Elliott, J. (1985). "Facilitating Action Research in Schools: Some Dilemmas." In *Field Methods in the Study of Education*, edited by R. Burgess. Lewes: Falmer Press.

Greeno, J.G., M. Magone, and D. Chaiklin. (1979). "Theory of Constructions and Set in Problem Solving." *Memory and Cognition* 7, 6: 445–461.

Grinberg, J.G. (1989). "Reflective Pedagogical Thinking in Teacher Education." Master's thesis, Eastern Michigan University, Ypsilanti, Mich.

Hollingsworth, S. (1990). "Teacher Educator as Researcher: An Epistemological Analysis of Learning to Teach Reading." Paper presented at the annual meeting

Reprinted with permission from ERIC
Clearinghouse on Educational Management.

Reconstructive Reflective Teaching:
A Review of the Literature

"We do not need new information. We need time to think about the information we have." Ann E. Berthoff

In the past decade the paradigms of Reflective professional practice have begun to change the way educators view the process of education. Rooted in the normative philosophies of Friere and Dewey (Smyth, 1989), and first articulated by Schon (1983), Reconstructive Reflective teaching, especially, seems to hold the most promise for reform and renewal in the American educational establishment. Focused on change and commitment, Reconstructive Reflective teaching could substantially improve our educational institutions in the area of staff development.

Proponents of the movement argue that Reconstructive Reflective teaching will empower teachers and further professionalize the teaching profession, allowing teachers to challenge school bureaucracies and reclaim ownership of educational practices and goals (Schon, 1983, 1987; Goswami & Stillman, 1987; Bulloch, 1989; Smyth, 1989). The definition, assumptions, preconditions, process, impediments to, and results of Reflective Teaching are discussed in this paper.

Reflective Teaching Defined

The definition of Reconstructive Reflective Teaching has expanded, beginning with the work of Dewey and culminating in Schon's discussion, which includes purposeful goals for social change. John Dewey's early definition of reflection is:

> Active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it. [Reflection] also involved a state of doubt, perplexity. . . in which thinking originates and an act of searching. . . inquiring, to find material that will resolve the doubt, settle and dispose of the perplexity (Bulloch, 1989).9-12).

Although Donald Schon did not refer directly to Dewey's definition when he published his seminal work in the field of reflection in 1983, The Reflective Practitioner, this later researcher defines the process similarly. Schon describes reflection as a way of attending to the problems of practice, allowing oneself to become confused and open to new possibilities during the process of attending, then giving shape to those problems in order to discover new ways of both acknowledging one's own responses, seeing, and implementing solutions (pp. 49, 61).

The definition of Reflective Teaching Practice evolved further in the 1987 adaptation of his work for the field of education when Schon added the element of artistry. He discusses the necessity for educators, especially, to have a sense of artistry, a kind of intuitive knowledge drawn from both experience and research. Artistry enables the educator to effectively frame the problems encountered in practice and to become willing to risk improvising at all levels of the reflective process, from defining the problem to implementing the solution (p. 4).

The definition had already reached its present, normative form in 1983, however, when Schon included the broad purpose of achieving social justice, a focus reiterated throughout his later work (1987). This view is echoed by Grimmett (1989) and Bulloch (1989). Grimmett describes Reconstructive Reflective practice as a process that allows teachers to confront the "social, political, and cultural conditions" prohibiting self knowledge, for the goal of achieving human freedom (p. 28). Bulloch invokes Dewey's commitment to a democratic society in order to support his own assertion that reflective practice must have social goals and must be grounded in an explicit view of society, society as a democratic community (p. 16).

Besides revising society, Reconstructive Reflective teaching and the writing that often occurs with this educational practice allow the teacher to revise or re-see her view of herself and her basic beliefs about practice. She learns to achieve, through the process, a new understanding of herself as an educator within the context of her culture (Grimmett, 1989, p. 22). Writings, including personal experience, autobiography, journals, narratives, and more are central to the personal level of Reconstructive Reflection (p. 23).

When teachers reconstruct their previous beliefs about teaching and about themselves, they also gain new understandings of the ways in which political and cultural conditions limit educational practice and marginalize certain groups of students (Grimmett, 1989, p. 23).

Assumptions About Reflective Teaching

Major assumptions informing Reconstructive Reflective teaching concern language, ethics, and values. Reflective teachers share the belief that knowledge is socially constructed (Ross, 1989), and that language is the primary agent in creating and shaping that knowledge (Henderson, 1989, p. 10). Since knowledge about practice is the chief reality for the teacher, this reality must be addressed, "named and framed" as Schon says (1983, p. 40) within the specific social and institutional context of the classroom setting. Talk, negotiation, and writing about these realities, the knowledge of classroom events, create a fabric of meaning for teachers (Berger & Luckman, 1966, pp. 14, 23).

The second assumption is that while reflective teachers address the realities of the classroom situation, talking, writing and thinking about these elements, they must also attend to the ethical considerations implicit in the processes of reflection. The acts of defining, hypothesizing, and improvising about problems of practice involve choices that must be made rationally and responsibly (Bulloch, 1989, p. 20). Teachers are obligated to note the possible effects of discovered solutions for students, colleagues, the institution, and the public.

The third assumption of reflective practice is that improvisations and choices made and implemented in practice will be congruent with basic values of the educator: learning, respect for students, and the fostering of community (Bulloch, 1989, p. 17).

Conditions for Reflective Teaching

In addition to specific, shared assumptions, certain preconditions, especially a supportive environment and the process of dialogue, are also necessary for Reconstructive Reflective teaching to be practiced. The supportive environment encourages purposeful, discovery-oriented dialogue among teachers, teaches and administrators, and teachers and students (Schon, 1987; Nolan, 1989; Henderson, 1989). To be effective, the dialogue must deal with the affective dimensions of practice. Dialogue that acknowledges the emotional dimensions of specific classroom and institutional problems consists of nondefensive language that recognizes and names feelings of confusion, frustration, and/or loss of control of the situation (Schon, 1987, pp. 163-166).

The dialogues themselves, the shared language, either verbal or written, will develop as a significant means by which both faculty and administrators can learn to see that the confusions and problems of practice are legitimate objects of reflection and that the language that shapes these problems and their solutions is negotiable. The elements of negotiability and choice inherent in language and problem-solving empowers faculty members to act collaboratively with colleagues, administrators, and students in processes of shared discovery (Smyth, 1989, p. 5).

Procedures for Reflective Teaching

Specific procedures for the practice of Reconstructive Reflective Teaching are amply described in the literature on the topic. Whether focused either on the immediate problems of the classroom or on the broader concerns of institutional and social goals, the process of reflection is similar in both cases.

The reflective teacher attends to these problems in a sequence of recognitions, experiment, and change. The teacher begins by recognizing a problematic or puzzling situation in the classroom, a student or a group of students who are confused, purposeless, or otherwise not engaged in learning (Henderson, 1989). The teacher then acknowledges her own feelings of surprise and confusion as she recognizes the similarities and differences between this particular situation and other classroom situations. The teacher then frames the situation by describing it and asking herself: "What is this?" and, the next important question, "How have I been thinking about it? What values and practices led to it?"

Smyth (1989) describes other questions that may further guide the process of self confrontation:

> What do my teaching practices say about my values and beliefs about teaching?

> Where did my beliefs originate?
> What social practices result from these beliefs?
> Why do I continue to hold these beliefs?
> Are they exclusive or democratic?
> What views of power do they imply?
> What particular group's interest is advanced by my practices?
> What limits my beliefs about what is possible in teaching? (7).

This process of questioning one's assumptions helps the teacher to think about her own thinking that resulted in the situation, and then to revise her previous assumptions, that is, to reconstruct her thinking, eventually asking herself "How can I do this differently?" (Smyth, 1989, pp. 5, 6, 7). The teacher then improvises and experiments, trying different solutions (Schon, 1987, p. 28).

By this means, the reflective teacher skeptically confronts not only her teaching practice, but the conditions that shape the practice. Reflection empowers her to learn to understand better both the practice and how beliefs and values cause us to invest the events of the practice with certain significances (Smyth, 1989, p. 4).

For instance, a teacher who is continually urged by parents and administrators to raise the standardized test scores of her students might reflect and write a classroom journal entry on the very system of accountability that she is being exhorted to embrace. She might think in a new way about her own assumptions about this system as an inevitable part of the educational system, and, she might eventually question whether or not that inevitability was, in fact, really so.

She might then check the research on the topic in the light of her own skepticism, where she would discover that the accountability movement developed from the Cult of Efficiency described by Callahan (1962) in his book of the same name. As adapted by schools, the Cult of Efficiency resulted in the creation of the school organization and goals in the metaphor of the factory system.

Besides the accountability movement, other persistent effects of that metaphor are an emphasis on standardization, competitive processes, assessment, and the back to basics movement. The reflective teacher might question the applicability of such practices for an institution or organization whose goals are human learning rather than profitable production.

The teacher who clearly understands the goals and values of her profession is well equipped to adapt and create a practice that evidences these values. She does not have to rely on the inconsistent and frequently inhumane purposes of political, social, and historical forces alien to these values. This teacher would be likely to emphasize in her classroom the practices that would result in higher level thinking skills, critical and abstract thought, and the increase in reasoning ability for her students rather than drill in rote, disconnected, test-oriented bits of information. The former practices would be more congruent with her educational values.

And the teacher who is a practiced writer of classroom journals, articles, and letters, is far better equipped to advocate the cause of educational values and goals to administrators, parents, and other teachers (Moffatt, 1981, p. 93; Nolan, 1989, p. 36). She has a strong sense of her professional identity and a good grasp of her topic.

Barriers to Reflective Teaching

Numerous barriers to reflectivity in the classroom exist, however. Budget cuts, faculty turn-over, and traditional faculty autonomy can all prevent schools and colleges from forming the communities necessary to support productive reflection. The chief impediment to reflection, however, may be the back to basics, accountability and assessment movements that attempt to falsely persuade both educators and the public that schools and teachers are the reason for the economic difficulties currently faced by the United States (Smyth, 1989, p. 3).

Conclusion

Despite these barriers, much about the practices of Reconstructive Reflective teaching recommend themselves as staff development for teachers at all levels, kindergarten through college. First, Reflective Teaching is inexpensive staff development (Cruickshank, 1987). Second, the experimentation and thought required by reflective teaching improves teaching and improves faculty attitudes about teaching. Teachers who reflect on their practices and the organizational and cultural contexts of practice gain a new sense of their identities as experts in their fields (Goswami & Stillman, 1987, preface). This stronger sense of identity enables teachers to become part of an intellectual community, itself a source of change and growth (Schon, 1987, pp. 342-343). The community theme of defining, experimenting with, and improving practice provides both unity and coherence to an otherwise fragmented school life. Finally, this reflective focus results in better curriculum and better education for all students, a legitimate social goal in and of itself (Schon, 1987, p. 543). Better education may be the one social goal that can enable this country to survive and meet the challenges presented by other goals before us, especially the goal of social justice for an increasingly diverse population within the context of a democracy.

References

Berger, P.L. & Luckman, T. (1966). The social construction of reality. Garden City, N.Y.: Doubleday.

Bulloch Jr., R.V. (1899). Teacher education and teacher reflectivity. Journal of Teacher Education, 40(2), 15-21.

Callahan, R.E. (1962). Education and the cult of efficiency. Chicago: University of Chicago Press.

Cruickshank, D.R. (1987). Reflective teaching. Reston, Va.: Association of Teacher Educators.

Goswami, D. & Stillman, P. (Eds.). (1987). Reclaiming the classroom: Teacher research as an agency for change. Portsmouth, N.H.: Boynton/Cook.

Grimmett, P.P. (1989). A commentary on Schon's view of reflection. Journal of Curriculum and Supervision, 5(1), 19-28.

Henderson, J.G. (1989). Positioned reflective practice: A curriculum discussion. Journal of Teacher Education, 40(2), 10-13.

Moffett, J. (1981). Coming on center. Montclair, N.J.: Boynton/Cook.

Nolan, J.F. (1989). Can supervisory practice embrace Schon's view of reflective supervision? Journal of Curriculum and Supervision, 5(1), 35-40.

Ross, D.D. (1989). First steps in describing a reflective approach. Journal of Teacher Education, 40(2), 22-30.

Schon, D. (1983). The reflective practitioner: How professionals think in action. New York: Basic Books.

Schon, D. (1987). Educating the reflective practitioner. San Francisco: Jossey Bass.

Smyth, J. (1989). Developing and sustaining critical reflection in teach education. Journal of Teacher Education, 40(2), 2-8.

Reprinted with permission from Teachers College Record, Volume 92, Number 1, Fall 1990.

Teacher Development in Professional Practice Schools

ANN LIEBERMAN
Teachers College, Columbia University

LYNNE MILLER
University of Southern Maine

In the current period of educational reform, the movement to restructure schools has been linked with initiatives to improve the preparation and ongoing development of teachers. Professional practice schools, also known as professional development schools, have emerged as a promising model for connecting school renewal and the reform of teacher education. Unlike laboratory schools sponsored by universities and operating independently of public education, professional practice schools exist as part of public school systems, are governed by lay boards of education, and serve public school populations. These schools are best characterized as having three complementary agendas: (1) to provide a context for rethinking and reinventing schools for the purpose of building and sustaining the best educational practices, (2) to contribute to the preservice education of teachers and induct them into the teaching profession, and (3) to provide for continuing development and professional growth of experienced in-service teachers. This third agenda, teacher development, is the focus of this article.

We approach the topic of teacher development in professional practice schools with both optimism and caution. We are optimistic because we think the time is ripe for the creation of professional practice schools and because we know from our own experience and the experience of others that teacher development activities can enhance efforts to improve teaching and to improve schools. We are cautious because we also know that in the name of professional development, educators have committed a multitude of sins. Too often, structured activities and programs have served to reinforce the status quo rather than change it, perpetuating the "paternalistic system that

---

This article was commissioned by the American Federation of Teachers (AFT), Education Issues Department, as part of a grant from the Exxon Foundation on the conceptualization of professional practice schools.

reinforces 'schooling as usual.' "[1] We think it is important, then, to define what we mean by teacher development and to distinguish our construction of the concept from the competing notions of in-service education and staff development.

To our way of thinking, the term *in-service education* has come to be synonymous with training and implies a deficit model of education. Before the 1950s and the growth of teachers' colleges, there was a focus on certification and licensure of teachers. Perhaps because of this, there was little concentrated effort on thinking about teacher development for in-service teachers. Authoritarian management practices and talking about teaching practices, rather than talking with teachers about their practices, were seen as legitimate in-service education. In the first National Society for the Study of Education (NSSE) Yearbook that focused primarily on in-service, there was a major shift, in discussion if not in practice, to democratic practices, cooperative research, and collaborative work among teachers, principals, and researchers.[2] The teacher came to be seen not as an object but rather as an engaged subject, capable of continuous development. These two models, a deficit approach assuming that teachers need information from people in authority and a collaborative approach based on notions of teachers as colleagues engaged in inquiry about practice, became deeply ingrained in the profession.

After the launching of Sputnik, coincidentally in the same year that the NSSE yearbook was published, in-service took hold once again as subject matter specialists from the arts and science faculties in universities were enlisted to write teacher-proof curricula. Teacher institutes, financed by the National Defense and Education Act (NDEA), proliferated. These institutes were designed either to train teachers to use new, externally developed instructional materials or to update teachers in current academic thinking in the content areas. The failures of this approach to professional development are legion and have been carefully documented.[3] One might suppose that the notion of in-service education as training died a quiet death some time ago. Sadly, this is not the case. In many districts and schools, professional development still implies a deficit training model. Assemblies filled with an entire school staff still dot the landscape of allocated "staff development days." Outside experts still transmit "the word" – whether Assertive Discipline, Mastery Teaching, or the Elements of Effective Schools – to the unanointed. Teachers are viewed as "the passive recipients of someone else's knowledge"[4] rather than as sources of knowledge themselves or active participants in their own growth and development.

The term *staff development*, on the other hand, implies a broader notion of professional development – one with which we are more, but not totally, comfortable. In the mid-seventies, there was a major shift in the research on and writing about staff development, exemplified by the findings of the Rand Change Agent Study, John Goodlad's analysis of the League of Cooperating Schools, and Gene Hall and Susan Louck's work on teacher concerns.[5] This shift was most notable for its emphasis on the school as an organization and the connection that it made between the development of teachers as individuals and the development of the school as a whole. In 1979, we defined staff development as "working with at least a portion of a staff over a period of time with the necessary supportive conditions."[6] While this approach to teacher development was more broadly construed than in-service training, it oftentimes, though not always, assumed that the role of development was to assist teachers in adopting an externally designed program, making adaptations to some technological innovation, or implementing a federal or state mandate.

We choose here to use the term *teacher development* when we write and talk about professional growth activities in a professional practice school. By teacher development, we mean continuous inquiry into practice. In this construction of professional development, we see the teacher as a "reflective practitioner," someone who has a tacit knowledge base and who then builds on that knowledge base through ongoing inquiry and analysis, continually rethinking and reevaluating values and practices.[7] Teacher development is not only the renewal of teaching, but it is also the renewal of schools—in effect, culture building. In the following pages, we first provide a framework for developing a culture of inquiry in a school, then consider professional growth activities that are appropriate to that culture, and finally discuss some of the problems and dilemmas that must be recognized and worked through to maintain and support teacher development in professional practice schools.

BUILDING A CULTURE OF SUPPORT FOR TEACHER INQUIRY

Having made the case for teacher development as continuous inquiry into practice, we are well aware of the complexity of this notion, the difficulty of transforming it into reality, and the necessity of having, or creating, a culture in the school that supports teachers as they become active inquirers into the process of teaching and learning. Fortunately, in the last few years, research and practice have provided some important insights about how such a culture can be constituted. Five elements have emerged as essential: (1) norms of colleagueship, openness, and trust; (2) opportunities and time for disciplined inquiry; (3) teacher learning of content in context; (4) reconstruction of leadership roles; and (5) networks, collaborations, and coalitions. Below, we discuss each of these elements and how they combine to create a culture of support for teachers engaged in continuous inqui[illegible]

COLLEAGUESHIP, OPENNESS, AND TRUST

Judith Warren Little, in what has become a benchmark study of staff development, followed six urban schools as they became involved in district-sponsored staff development.[8] Her findings indicated that norms of collegiality and experimentation were most responsible for the successful implementation of new programs. In schools where the principal was actively engaged with teachers and announced expectations for and modeled behaviors of colleagueship, there was increased support for self-examination, risk-taking, and collective reflection on practice. When teachers and principals observed each other in classrooms, had time to talk about what they were doing, and worked to find solutions for commonly defined problems, the life of the teachers in the school was transformed. Traditions of privacy, practicality, and isolation were replaced by shared ownership of issues, a willingness to consider alternative explanations for practices and behaviors, and a desire to work together as colleagues. In effect, in developing successful staff development in support of a new program, the staff was building a new culture for the school and defining new ways-of-being for themselves as teachers: "The successful program rested on long-term habits of shared work and shared problem solving among teachers. Such patterns of mutual assistance, together with mechanisms by which teachers can emerge as leaders on matters of curriculum and instruction are also typical."[9] These notions of shared work, shared problem-solving, mutual assistance, and teacher leadership in curriculum and instruction are—to our minds—the cornerstones of building a school culture that supports continuous inquiry into practice.

Susan Rosenholtz, in her study of the school as a workplace, added to our understanding of the effects of the norms that Little describes.[10] Rosenholtz categorized schools as being either "learning enriched" or "learning impoverished."[11] Learning-enriched schools had collaborative goals at the building level, minimum uncertainty, positive teacher attitudes, principal support of teachers to the point of removing barriers, and support for collaboration rather than competition. On the other hand, learning-impoverished schools had no clear or shared values, were places where teachers rarely talked to each other, where work was perceived as routine, and where self-reliance and isolation flourished. In the learning-impoverished schools, teachers, with no vehicle for discussion and reflection, retreated to their individual classrooms, kept quiet about their successes and failures, and assumed a public stance of being expert teachers for fear of being found to be less than adequate. In the learning-enriched schools, the opposite was true. Teachers who shared their successes and failures were more willing to identify and explore common problems and seek common solutions. The myth of expertise was replaced by the reality of collective struggle and discovery. As does Little, Rosenholtz provides evidence that norms of colleagueship and collaboration are among the necessary conditions for teachers to reconceptualize their work, to engage in active investigation about their practices, and to expect that professional learning and growth are part of the worklife in schools.

OPPORTUNITIES AND TIME FOR DISCIPLINED INQUIRY

In a school where teachers assume leadership in curriculum and instruction and where reflective action replaces routinized practice, the need for providing opportunities and time for disciplined inquiry into teaching and learning becomes crucial. Unlike traditional school settings, professional practice schools are places where teachers, sometimes working with university scholars and sometimes working alone, do research on, by, and for themselves. It is necessary that professional practice schools provide the conditions for teachers to develop the skills, perspective, and confidence to do their own systematic investigation.

The notion of teacher-as-researcher is not new. Writing over twenty years ago, Robert Schaefer, then dean of Teachers College, Columbia University, urged that schools should organize as "centers of inquiry."[12] More recently, Miles Myers, president of the California Federation of Teachers, argued that "school site teacher research projects are a basic requirement of the current second wave of school reform."[13] The case, then, has been made for teacher research, but the question remains: How do schools organize themselves and create the necessary conditions so that teacher research is encouraged, supported, and used? The answer, we suspect, is not to have externally driven workshops on research methods and then ask school staffs to apply their learning to practice. Rather, the research sensibility must be infused into the dailiness of the school. Such an infusion takes time and commitment. It begins with an acknowledgement of the importance of norms of collegiality and experimentation; it builds on shared problem identification and a mutual search for solutions; it depends on taking a risk in the classroom, it requires the support of colleagues. Let us present a case in point.

Mary George is a first-grade teacher in a school that is trying to organize around Schaefer's notion of the school as the center of inquiry.[14] For over a year, she and her colleagues have been meeting in grade-level teams and in schoolwide forums. The question the faculty has been grappling with over the year is "How do we understand more about how children learn?" Mary has had no formal training in research; what she does have is a very specific problem that has been troubling her and her colleagues: How do children approach new words they encounter in their reading? Like her colleagues, Mary has been torn between phonics and whole-language approaches, but has been wary of accepting one to the exclusion of the other. She took her problem with her into her class one day and when she generated a list of words that students missed in an initial reading of a book, she began a spontaneous inquiry into how children learn new words. She asked the children, "How many of you could figure out the word *left*?" One little boy raised his hand and explained how he sounded out the word, beginning with the initial consonant and moving on to the vowel and the final consonant sounds. A little girl raised her hand and began to explain how she knew the story was about hands and she knows that people have a left and a right hand and she knew that the word in question began with *L*, so figured out that the word must be *left*. A third child told the class that she knew the word because she saw it in another book. She proudly found the other book in the classroom library and showed it to the class.

This simple classroom experiment was, to our minds, the beginnings of teacher research. George acknowledged later, in discussing what she did with her grade-level colleagues, that she considered her initial question an enormous risk—she had never approached her teaching as research before. She also acknowledged that the ethos of inquiry that dominated the school and the support she knew she would get from her colleagues gave her the courage to try her experiment. Needless to say, she was delighted with the results, as were the rest of the first-grade teachers, each of whom took George's question to her next class. Together, the first-grade teachers began putting together the pieces of the puzzle of word recognition in a way that made sense to them and had value for their classroom practice.

Teacher research, of course, can be more complex and more sophisticated than George's spontaneous inquiry, but we should not let sophistication and complexity become the criteria by which we judge disciplined inquiry into practice. Rather, the importance of the question, the legitimacy of the sources of data, and the usefulness of the results should guide our practice. What is important is that authentic teacher research develops in an environment where culture building and professional colleagueship are also being nurtured and sustained.

TEACHER LEARNING OF CONTENT IN CONTEXT

One might argue that all of this talk about teacher development as continuous inquiry into practice is long on process and short on content, that it places too much value on reflection and sharing and not enough value on just what is being reflected on and shared. As Myrna Cooper reminds us, "In professional settings, when teachers are moved to share, it is usually because they are proud of something they have done with children."[15]

We are fortunate that at the present moment in education we can point to several practices, developing separately and simultaneously, that challenge conventional assumptions about instruction. These approaches em-body a common belief that the learner is at the center of the educational enterprise. For lack of a better term, we call these approaches "content-in-context learning." Unlike the call for cultural literacy and core learnings, content-in-context approaches acknowledge the complexity of teaching and learning, provide room for flexibility and diversity, and—at the same time—manage to maintain the legitimacy of the content areas and the teacher's responsibility to teach children something of value. Central to this school of thought is the notion that students come to school with prior knowledge and ongoing access to valuable experience, both of which can be tapped to motivate and ground school learning.

In a recent article, David Elkind distinguished this approach, which he views as developmental in orientation, from more conventional school practices, which he identifies as having a psychometric orientation.[16] From the developmentalist point of view, all learners have developing abilities; the task of the schools is to match the curriculum to the student. From the psychometric perspective, on the other hand, intelligence is fixed and measurable; the task of the school is to match like students to each other and to match students to the curriculum. The developmentalist sees learning as a creative, active, and constructive process that engages the learner, continuously and reciprocally, with the content area; content and skills are connected and interdependent. The psychometrician sees learning as a series of acquired behaviors that are mastered through the application of general principles such as intermittent reinforcement; skills and content are independent and, once mastered, skills are transferable to other knowledge domains. The aim of education for the developmentalist is to create people who, in the words of Piaget, "are capable of doing new things . . . who are creative, inventive, and discoverers. The second goal of education is to form minds which can be critical, can verify and not accept everything that is offered."[17] In contrast, the psychometric aim of education is less general and more technical: to maximize skills acquisition in a way that is quantifiable and meets demands for accountability.

Recent developments in research on cognition further support the developmentalist, or content-in-context, position.[18] This line of research recognizes the complexity of school learning, the necessity of constructing ill-defined problems, the importance of mastering metacognitive strategies as well as knowledge acquisition, the connection of cognition to specific content knowledge domains, the centrality of prior knowledge, and the need for a mix of cognitive and social skills in defining and solving problems. Under this framework for learning, the basic unit of instruction is the task, not the lesson or the textbook.[19]

The implications of research on cognition and of the developmental approach are nothing short of revolutionary. They direct us to reconceptualize teaching, to see it as being woven of the same cloth as learning. Teaching and learning are interdependent, not separate, functions. In this view, teachers are primarily learners. They are problem-posers and problem-solvers; they are researchers; and they are intellectuals engaged in unraveling the learning process both for themselves and for the young people in their charge. Learning is not consumption; it is knowledge production. Teaching is not performance; it is facilitative leadership. Curriculum is not given; it is constructed empirically, based on the emergent needs and interests of learners. Assessment is not judgment; it documents progress over time. Instruction is not technocratic; it is inventive, craftlike, and above all an imperfect human enterprise.

Teachers using content-in-context approaches need to add to their teaching repertoire. Lectures, seat work, worksheets, and unit tests must be deemphasized as dialogue, discussion, and production take their place. Whole-language approaches, learning math through the use of manipulatives, hands-on science classes, and the process approach to writing all represent content-in-context approaches to learning. The Foxfire project, which has gained so much national attention, is another example of what we mean. Foxfire is what Wigginton calls a "style of education"[20] and is best understood through its ten principles:

1. All work teachers and students do together must flow from student desire.
2. Connections of the work to the surrounding community and the real world outside the classroom are clear.
3. The work is characterized by student action rather than passive reception of processed information.
4. A constant feature of the process is its emphasis on peer teaching, small group work, and teamwork.
5. The role of the teacher is that of collaborator and team leader and guide, rather than boss or the repository of all knowledge.
6. There must be an audience beyond the teacher for student work.
7. The academic integrity of the work must be absolutely clear.
8. The work must include honest, ongoing evaluation for skills, content, and change in student attitude.
9. As the year progresses, new activities should grow out of the old.
10. As the students become more thoughtful participants in their own education, our goal must be to help them become increasingly able and willing to guide their own learning, fearlessly, for the rest of their lives.[21]

We think that these ten principles incorporate many of the principles of curriculum and instruction that are implied in contemporary research on cognition. We also believe that this style of education is most likely to develop in an environment where openness and collaboration are valued and where disciplined inquiry is encouraged. If professional practice schools are, in fact, centers of inquiry where continuous teacher development is normative, then the content-in-context style of education provides most of the substance around which inquiry may be focused. As we cautioned at the beginning of this article, however, these process approaches to student learning and teacher facilitation must also be continuously examined. Students' products must grow in complexity and thought. Process does not automatically move to better products. It too must be scrutinized by both teacher and student for its importance, depth, and enhanced understanding. We are talking, not about panaceas, but about the development of habits of mind that make it legitimate to continually ask questions of practice.

RECONSTRUCTION OF LEADERSHIP ROLES

In traditional school settings, leadership is defined by one's position in the organization. Principals have leadership; teachers do not. In professional practice schools, the whole concept of leadership is in the process of being reconstructed. Thomas Sergiovanni makes what we think is a useful distinction between technical and managerial conceptions of leadership and cultural leadership:

> In human enterprises such as the profession of teaching and schooling, technical and managerial conceptions should always be subordinate to human needs and actions and should always be practiced in service of human ends. Cultural leadership—by accepting the realities of the human spirit, by emphasizing the importance of meaning and significance, and by acknowledging the concept of professional freedom linked to values and norms that make up a moral order—comes closer to the point of leadership."[44]

What Sergiovanni is proposing is that principals learn to think and act as leaders in ways that are different from custom and tradition. According to Sergiovanni, leaders lead by purpose and empowerment. They have power, but of a different sort than is usually practiced. Their power is viewed as "power to accomplish" rather than "power over people and events." They practice the concept of "leadership density . . . the extent to which leadership roles are shared and the extent to which leadership is broadly exercised."[45] When construed in these ways, leadership becomes something that both administrators and teachers have and use, and leadership becomes an essential ingredient in transforming schools into centers of inquiry.

For principals, life in such a setting requires a radical shift in attitudes and behaviors. In a compelling study of two high school principals, Mary Lynne Derrington brought home the difficulty building administrators have in making the transition from technical and managerial leadership to cultural leadership. She identified three steps in the transition, shown in Table 1.[24]

Table 1. Transition in Leadership Style

Tradition	*Transition*	*Transformation*
The boss	The lone ranger	Parallel leadership
Branch manager	Hero	Hero maker
Adversarial	Competitive	Collegial
Views teachers as objectives for improvement	Views teachers as vehicles for improvement	Views teachers as partners for improvement
Works through directive	Works through small groups	Works through collaboration and power equalization
Rewards and punishes	Builds coalitions	Solves problems

For teachers, it is equally difficult to assume new roles. Patricia Wasley uncovered many of the tensions and dilemmas that teacher leaders faced as they assumed new roles in schools.[25] She noted that all the teacher leaders she studied felt constrained by time—time to both teach and lead effectively and time to work collaboratively with their colleagues. Teacher leaders were often confused about the primary purpose of their positions: Were they to support teachers or were they to support administrators? In addition, they had a tough time dealing with their colleagues in the new leadership roles. An egalitarian ethic dominates teaching and many teachers had difficulty in recognizing one of their own as a leader. To paraphrase Orwell, the notion that all teachers are equal but some teachers are more equal than others went against the grain. Most importantly, the success of teacher leadership depended on the ability of the principal to make the transition from traditional to transformative or cultural leadership.

It is clear, then, that one of the tasks a professional practice school faces is to make the transition from bureaucratic and hierarchical modes of leadership to alternative forms. That this is difficult and fraught with tension must be acknowledged. What also must be acknowledged is that in schools where principals and teachers together make the transition, there exists the real possibility for colleagueship, and the development of a new professional culture. In schools where teachers are making responsible and grounded decisions about instruction in their classrooms and where principals are supportive of the decisions that teachers make, the possibility for continuous learning takes root.

One example shows what this could look like. Suzanne Soo Hoo described a project in which she, in collaboration with another principal and a university faculty member, engaged teachers in a discussion of the misuses of standardized tests.[26] Teachers generated questions such as: How do we know students are learning? How do we capture the data that are available in our classrooms? What are some new ways of displaying student achievement? Teachers kept journals, while the university researcher observed classes and helped with data-collection techniques. Through monthly meetings and discussion using the information teachers collected and other data, the principal facilitated the growth of a culture of inquiry. In this case the principal, in partnership with teachers and a university researcher, provided the impetus to look at the frustration of testing and unlocked a variety of understandings about assessment, which in turn led to other subjects for inquiry. Again, description and practice begin to show us how to think about and engage teachers as lifelong learners.

NETWORKS, COLLABORATIONS, AND COALITIONS

While it is important to concentrate energies on the specific school site, it is also important to develop support outside of the school. Too often schools in the process of radical transformation suffer from the "funny farm syndrome." They stand out in their district as different and, oftentimes, threatening. Teachers involved in professional practice schools may find they have a difficult time explaining just what they are about to colleagues within their own district. They may find that the support they need from the immediate environment is lacking. The formation of networks, collaborations, and coalitions is helpful in combating this syndrome, in providing the support and encouragement for teachers to continue to experiment, to question, and to work to change common practices in an effort to improve education for children.

Networks, collaborations, and coalitions take many forms. They may be informal collections of people or they may be more formalized partnerships among institutions. In any case, such groupings share some common characteristics: They are held together by a common purpose, provide for the exchange of information and psychological support, are voluntary, and are based on the equal participation of all members.[27] For examples of how networks function, we draw on our own experience and on the experience of others involved in school-improvement efforts.

The Puget Sound Educational Consortium and the Southern Maine Partnership are both members of the National Network for Educational Renewal, a coalition of school-university partnerships. In both Washington and Maine, the partnerships serve more to connect people across schools and districts than to connect schools to the university. In both settings, groups of teachers come together regularly to discuss and act on matters of common concern. In the past two years, teacher groups have dealt with issues of equity, teacher leadership, restructuring schools, grouping practices, early childhood education, and at-risk students. The power of the groups is that they are self-directed, define their own agendas, and provide the opportunity for teachers of like minds and like dispositions to exchange experiences and ideas in an atmosphere of support and common understanding. People who have been involved claim that participation in the groups provides the extra support they need to return to their schools with renewed energy and commitment.

The Coalition of Essential Schools is an example of collaboration at the national level, where schools are drawn together by a common purpose and a clearly defined mission. The coalition grew out of the work of Theodore Sizer and is comprised of over forty high schools that ascribe to a set of principles that involves different roles for teachers as generalists and for students as workers and a different conception of the high school curriculum; "less is more" has become the credo of the group.[28] Though the coalition does not provide much opportunity for face-to-face interaction among teachers at member schools, it does serve as a source of support for schools, many of which are isolated in their districts and look to a national movement to help legitimate local efforts.

So, too, the Mastery In Learning Project (MIL) of the National Education Association seeks to link schools together in a national network where common purposes are shared and a common vision is upheld. School faculties join MIL after they complete a comprehensive profile of their schools and commit themselves to a plan for rethinking and redoing education. Unlike the coalition, there is no one model for the transformation of schools. Rather, there is a process of analysis, action, and reflection to which members agree. MIL is linked by a computer network whereby all member school faculties can confer with each other and have access to an education data base to assist in their individual efforts. Like the coalition, MIL helps legitimize local reform and renewal efforts. In addition, it provides the opportunity for teachers to communicate with their peers from other parts of the country, to form professional alliances, and to support each other in their work.

Networks, collaborations, and coalitions need not be so formal as those discussed here. The Philadelphia Teachers' Learning Cooperative[29] is a fine example of teachers coming together on an informal basis once a month to discuss a preassigned reading. In other cities and towns, teachers have formed small resource centers where they can meet to discuss issues, exchange ideas, learn about effective practices, and develop learning materials.

The point we want to make is that schools, like teachers, can be isolated and estranged from the mainstream. School faculties must learn to reach out beyond their traditional borders and create sources of support, challenge, and legitimacy for themselves. Teachers who see themselves as part of a school in the process of change must also see themselves as part of a profession in the process of change. In that way, the norms and values of the school become part of a larger social system, one that sustains improvement and encourages it.

TEACHER DEVELOPMENT IN PROFESSIONAL PRACTICE SCHOOLS

The five elements that combine to create a culture of support for teacher inquiry do not take root quickly. It takes time for change to happen, even in a school that defines itself as different. Teacher-development activities must occur alongside the development of the new school culture. In fact, teacher development and culture building are part of the same process in a professional development school. This means that teacher-development activities are designed around notions of colleagueship, openness, and trust; they provide time and space for disciplined inquiry; they focus on teacher learning of content in context; they provide opportunities for new leadership roles, and they become engaged in networking activities and coalition building beyond the boundaries of the school. Teacher-development activities that seem to combine these elements and hold particular promise for professional practice schools include the following.

Teacher study groups meet regularly to discuss an agreed-on topic or theme. Teachers rotate leadership of the group. The role of the designated teacher-leader is to select a common reading and to make it available to all group members before the meeting, to structure discussion by preparing a question or problem to answer, to facilitate discussion, to ensure that minutes of the meeting are taken and distributed, and finally to guide the group in making a decision about the direction the next meeting should take. In general, teacher study groups take place outside of the school in an informal setting around a pot-luck meal or a similar occasion.

Curriculum writing involves groups of teachers working together over time with the intention of developing a product for use in the classroom as part of the instructional program.[10] The product varies as the task varies and may take the form of a guide for teaching, an inventory of classroom practices, a statement of expectations of learners and teachers, a program evaluation, a set of recommendations for program design—anything that meets the needs, interests, and inventiveness of the teachers involved. Curriculum writing groups are teacher-initiated and teacher-led. They last as long as it takes to complete a task, allowing teachers the opportunity to move in and out of groups as time and interest permits.

Teacher research projects may be individually or group initiated. The project begins with the identification of a problem that matters to people. Even though one person's problem may seem trivial to someone else, it is important to assume that each individual or group engaged in research has a legitimate concern that needs to be addressed. The goal of the research is both to understand practice and to improve it. The major activity or teacher research is the collection and analysis of data. Data collection need not be cumbersome or overly technical. Data can be collected through observation, informal interviewing, journal entries, and brief surveys. Researchers do not have to worry about doing complex statistical analysis of proving the generalizability of findings, since the problem under consideration is idiosyncratic to the people involved or to the specific school. Often, teacher research is published informally to share the information with other faculty.

Peer observation involves teachers, usually in pairs, making informal contracts to visit other classrooms and to observe each other teaching. Sometimes, the visiting teacher will concentrate on the behaviors and practices of the teacher. At other times, the visiting teacher will focus on the actions of the students or of one or two students in particular. In any event, the object of the observation is mutually determined before the visit takes place. The visiting teacher and the teacher being observed then take time to discuss the observation. It is the role of the visiting teacher to provide descriptive feedback to the observed teacher, and it is the role of the teacher observed to make sense of the feedback. The contract is renegotiated after each visit and may be altered or terminated at any mutually agreed-on point.

Case conferences engage teachers in a method of problem solving usually reserved for the medical and social work professions. In the case conference, a group of teachers meets to discuss individual students. The person presenting the case is responsible for developing a history of the child in school and a description of problematic behaviors, attitudes, or academic concerns. The task of the other group members is to pose questions that clarify the issues at hand and to offer suggestions for solving the problem. Each meeting focuses exclusively on one case. Participants rotate in presenting cases to the group.

Program evaluation and documentation assumes that teachers want to evaluate current practices as part of an ongoing investigation of what works and what does not work for children. As new programs are put in place, new textbooks adopted, new practices of grouping students initiated, new approaches to instruction implemented, and alternative modes of assessment designed, teachers can collect information that will be useful in decision making in the future. Using the techniques of teacher research, an evaluation team collects data on a program or approach that the faculty as a whole has decided is worth evaluating. The evaluation team analyzes the data and presents its findings to the faculty for consideration and action. The role of the evaluation team is not to judge effectiveness, but rather to collect data for decision making by the larger faculty.

"Trying out" new practices with systematic support from colleagues is one way to make it easier for teachers to try and fail and try again, without beating a hasty retreat to routine and safe ways of doing things. As teachers become interested in content-in-context learning approaches, they may want to experiment with process-writing, begin a Foxfire project, or incorporate experiential learning activities into their teaching. We have found that the closer change gets to the individual classroom, the riskier it gets. When a cadre of teachers decides to try out something together, it is easier to experiment and take risks. This is the way such a cadre works: Teachers commit themselves to implement a new approach; they agree to meet regularly to discuss what is happening to them personally in their classrooms; they contract to observe each other and to provide feedback on the new practice; they agree to suspend all judgment and evaluation of themselves and others; they work together to become comfortable with what they are doing and to support each other in doing it better; they give themselves ample time to try and fail and try and succeed. In the end, they become confident of new practices and make decisions about whether to incorporate them into their existing repertoire, to modify them to suit their own needs, or to reject them as not helpful in the improvement of their own teaching.

Teacher resource centers can easily be incorporated into a school. A small room off the library or media center, a converted stockroom, a renovated space hidden somewhere in the building – any such space will suffice. We have seen teacher resource rooms in the basements of buldings and in old restrooms. The physical location does not matter; what matters is that there is a place for teachers to come together in the school to read professional journals, view educational videos, peruse books and catalogues, or simply engage in informal, but professional, conversation. Even in a professional practice school there will still be the need for a traditional teachers' lounge as a place for relaxation and social interaction. The teacher resource room, however, has other norms and expectations and provides other ways for people to interact with their colleagues during the school day.

Participation in outside events and organizations is a way for teachers to make connections beyond the boundaries of the schools in which they work. Providing for teachers to visit other schools engaged in reform and restructuring efforts is a valuable way to help people broaden their perspectives, become infused with new energy, and consider new ideas. When teachers are actually practicing new efforts and have already experienced success, teaching others about their new practice becomes a powerful means of professional development. Attendance at regional conferences is another way that teachers can reach out and connect with kindred spirits in other schools. Participation in partnerships with universities and businesses, involvement in coalitions with other agencies, membership in a formal network of teachers or schools, are yet other avenues for growth and development.

We have presented a partial list of the kinds of teacher-development activities that can take place within a professional practice school. We want to make it clear that none of the approaches we suggest is an "add on"; none is initiated outside of the worklife concerns of teachers; none is designed for people by someone else. Each, we think, contributes to the development of a new school culture; each acknowledges that the major goal of teacher development is continuous inquiry into practice.

TEACHER DEVELOPMENT—CHANGING STUDENT AND ADULT WORKING CONDITIONS

Our view of teacher development ends where it began, recognizing that the engagement of teachers in the creation of professional practice schools cannot be isolated from the larger vision of creating schools that work for all students. This means that the entire school is involved in discussion of and action on the issues of teaching and learning, such as new knowledge about how students learn, an understanding of the diverse and multicultural populations of students, and a developing sensitivity to changing cultural context—all of which call for new ways of thinking about and organizing teaching so that students are enabled to participate in their own learning.

Teachers, long isolated from one another, need to create and work in collective and collaborative structures. The isolated teacher must give way to a genuine colleagueship as the insulated school must expand to include the whole community. This means that the workplace for both students and adults must change, for they are intimately connected with each other. We know that teacher development involves teachers in learning about how to work together—how to make collective decisions and structure continuous opportunities for their own growth. At the same time, teachers must be involved in continuous learning about students—their motivation, engagement, connection, and experience—through practicing new ways of teaching and providing for new ways of student learning. These two strands represent distinct parts of teacher development, each requiring time, energy, and new knowledge.

We are cautious about saying that if changes are made in the adult workplace environment there will be positive changes in the student learning environment—or vice versa. *The two environments are connected only if connections are explicitly made.* It is possible for teachers to participate in school-site committees, to be involved in greater decision making, and to learn how to deal with conflict and negotiate contracts for greater teacher participation in the running of a school without changing what goes on in classrooms. Conversely, it is possible for several teachers to have classrooms characterized by cooperative learning teams, student-centered learning, and a major focus on problem-solving activities *without* addressing the need for schoolwide structures that promote collegiality and continuous inquiry, which in turn support efforts to improve learning for students.

We are optimistic because professional practice schools can promote, organize, and practice teacher development by explicitly connecting it to student development. Professional practice schools can provide a variety of learning environments for students as active learners, and a workplace environment for teachers that is rich in continuous inquiry, peer discussion, and opportunities for adult learning.

Notes

1. L. Lambert, "Staff Development Redesigned," *Phi Delta Kappan* 69, no. 9 (1988): 665.

2. Nelson B. Henry, ed. *In-Service Education for Teachers, Supervisors and Administrators*, 56th Yearbook of the National Society for Study in Education, Part I (Chicago: University of Chicago Press, 1957).

3. Seymour B. Sarason, *The Culture of the School and the Problem of Change*, 2nd ed. (Newton, Mass.: Allyn & Bacon, 1982).

4. Lynne Miller, "Curriculum Work as Staff Development," in *Staff Development for a Change*, ed. W. Pink and A. Hyde (Norwood, N.J.: Ablex Publishing, in press).

5. Rand Corporation, *Federal Programs Supporting Educational Change*, Vols. I–VII (Santa Monica, Calif.: Rand Corporation, 1977); and Milbrey W. McLaughlin and David Marsh, "Staff Development and School Change," in *Staff Development: New Demands, New Realities, New Perspectives*, ed. Ann Lieberman and Lynne Miller (New York: Teachers College Press, 1979); John I. Goodlad, *The Dynamics of Educational Change* (New York: McGraw-Hill, 1975); and Gene Hall and Susan Loucks, "Teacher Concerns as a Basis for Facilitating and Personalizing Staff Development," in *Staff Development*, ed. Lieberman and Miller.

6. Ann Lieberman and Lynne Miller, "The Social Realities of Teaching," in their *Staff Development*, p. ix.

7. Donald Schön, *The Reflective Practitioner* (San Francisco: Jossey-Bass, 1983), and idem, *Educating the Reflective Practitioner* (San Francisco: Jossey-Bass, 1987).

8. Judith Warren Little, *School Success and Staff Development in Urban Desegregated Schools* (Boulder, Colo.: Center for Action Research, 1981), and idem, "Seductive Images and Organizational Realities in Professional Development," in *Rethinking School Improvement: Research, Craft and Practice*, ed. Ann Lieberman (New York: Teachers College Press, 1986).

9. Little, *School Success*, p. 42.

10. Susan Rosenholtz, *Teachers' Workplace* (New York: Longman, 1989).

11. Ibid., pp. 80, 81.

12. Robert J. Schaefer, *The School as a Center of Inquiry* (New York: Harper & Row, 1967).

13. Miles Myers, "Teacher Research: A Policy Perspective" (Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1989), p. 1.

14. This case study is taken from field notes by Lynne Miller in Gorham, Maine, as part of a long-range study of school restructuring (1989).

15. Myrna Cooper, "Whose Culture Is It, Anyway?" in *Building a Professional Culture in Schools*, ed. Ann Lieberman (New York: Teachers College Press, 1988), p. 51.

16. David Elkind, "Developmentally Appropriate Practice: Philosophical and Practical Applications," *Phi Delta Kappan* 71, no. 2 (1989): 113–17.

17. Piaget quoted in ibid., p. 115.

18 See Kathleen Devaney and Gary Sykes, "Making the Case for Professionalism," in *Building a Professional Culture in Schools*, ed. Lieberman, pp. 3-22.

19 Ibid.

20 Eliot Wigginton, "Foxfire Grows Up," *Harvard Educational Review* 59, no. 1 (1989): 26.

21 Ibid., pp. 26-28.

22 Thomas Sergiovanni, "The Theoretical Basis for Cultural Leadership," in *Leadership: Examining the Elusive*, ed. L. Sheive and M. Schoenheit (Alexandria, Va.: ASCD, 1987), p. 127.

23 Ibid., p. 122.

24 M. L. Derrington, "The Role of the Principal: Tradition, Transition, and Transformation" (Ed.D. diss., University of Washington, 1989).

25 P. Wasley, "The Reform Rhetoric and Real Practice: A Study of Lead Teachers" (Ed.D. diss., University of Washington, 1989).

26 S. Soo Hoo, "Teacher Researcher: Emerging Change Agent" (Paper presented at the annual meeting of the American Educational Research Association, San Francisco, 1989).

27 L. A. Parker, *Networks for Innovation and Problem Solving and Their Use for Improving Education: A Comparative View* (Washington, D.C.: Dissemination Process Seminar, IV, 1979).

28 See Theodore Sizer, *Horace's Compromise: The Dilemma of the American High School* (Boston: Houghton Mifflin, 1984).

29 For a discussion of the cooperative, see J. Buchanan et al., "On Becoming Teacher Experts: Buying Time," *Language Arts* 61, no. 7 (1984): 731-36.

30 Miller, "Curriculum Work as Staff Development."

Reprinted with permission from Education Week,
December 12, 1990, Volume X Number 15.

Award Heralds Recognition of the Role of Teachers as Researchers

By Robert Rothman

In a move that some educators say heralds a growing recognition of the role of teachers in education research, the National Council of Teachers of English has for the first time awarded its highest research prize to a classroom teacher.

Nancie Atwell, a former 8th-grade teacher in Maine, last month won the 1990 David H. Russell Award for Distinguished Research in the Teaching of English for her book, *In the Middle: Writing, Reading, and Learning With Adolescents*.

N.C.T.E. officials insist that the award was based on the merits of her book, and was not a "political" move to honor teachers. But several observers—and Ms. Atwell herself—say the prize conveys a message that teachers can have a role as researchers.

In her acceptance speech, Ms. Atwell described her award as representing an acknowledgment that the "observations and reflections of classroom teachers count as research."

"When the knowledge that informs our profession comes from many quarters," she said, "when research is seen as an inclusive, rather than an exclusive process, everyone benefits, but children benefit especially."

With the increased interest in teacher professionalism, along with reforms in school structure and assessment, educators note, a growing number of teachers are undertaking critical analyses of classroom practices. In many cases, those teachers are also writing and reporting on their findings.

Such efforts, teachers say, have given them

Continued on Page 36

Role of Teachers as Researchers Gains Recognition

Continued from Page 1

a deeper understanding of how students learn and how teachers can contribute to such learning.

"It was the first time I ever felt like a mentor," said Ms. Atwell.

University-based researchers say they share the teachers' goals of ensuring that instruction is informed by an understanding of effective practice, and indicate that they welcome teachers as collaborators in their work.

They caution, however, that many classroom-based studies may lack the rigor and objectivity needed to produce high-quality research.

"There is a need for a knowledge base for effective teaching," said Gerald E. Sroufe, director of governmental and professional liaison for the American Educational Research Association. "Teachers need a consensus of research, an understanding of research, and ways of making use of research."

"But having teachers be researchers," he continued, "is not all that laudable."

Todd Endo, director of research and policy analysis for the Fairfax County, Va., public schools, said such opinions reflect too narrow a view of the nature of research. For many teachers, he said, the kinds of "ethnographic" studies of students that their classroom colleagues conduct are more useful than the quantitative analyses that dominate university departments and research journals.

"I think one of the basic things wrong with education is the kinds of courses, paradigms, and frameworks education students are subjected to in graduate and undergraduate courses," Mr. Endo said. "If that's what anybody means as research, teachers aren't doing it—thank God."

What teacher-researchers are doing "is gathering data and coming to conclusions," he continued. "They do that well. It's very clear teachers need to do more of that."

'Part of the Teaching Act'

The new interest in teacher research—or, as it is often called, "teacher-led inquiry," or "action research"—reflects a resurgence of a view of teaching that was prominent at the beginning of the century, according to Marsha Levine, associate director for education issues of the American Federation of Teachers.

"There was in the Progressive Era, through the work of John Dewey and Lucy Sprague Mitchell, a sense of the importance of teachers as reflective practitioners," Ms. Levine said. "Research was part of the teaching act."

That view waned in recent decades, she added, as teachers came to be seen as vehicles to deliver curricula.

"Research was conceived of as important," she said, "but was not part of the teaching process itself."

But educators have begun to rediscover the role of teachers in research as part of a growing movement to turn teaching into a profession like medicine or law, noted Arthur E. Wise, president of the National Council for Accreditation of Teacher Education.

"It is important that members of a profession, generally, be able to read and analyze emerging research findings," he said. "That has become an expectation for members of an established profession, that they keep up with literature and be appropriately guided by emerging findings in their fields. That has not been an expectation of teachers in the past."

The interest in teacher research also reflects changes in research methods, Ms. Atwell observed. Citing the work of Donald H. Graves, a University of New Hampshire researcher who has studied writing instruction, she said researchers are increasingly gathering data by observing actual classes, rather than by analyzing statistical models.

"If Donald Graves can come into Mary Ellen Giacobbe's class and study her methods, she can do that too," Ms. Atwell said.

The school-restructuring movement, which decentralizes authority to the school site, has also contributed to the growth of teacher research, argued Miles Myers, executive director of the N.C.T.E. Teachers involved in restructuring experiments must be able to create new forms of assessment, collect and analyze data, and conduct experiments to test new forms of school organization, he suggested.

"If you decentralize to site-based decisionmaking," he said, "and you continue to monitor schools the same way—use the same assessments, goals, and objectives—a lot of the possibility for creativity in site-based decisionmaking is going to be lost."

> *"We're not waiting for someone on high to tell us what research shows. It's the perfect antidote to teacher burnout."*
>
> —Nancie Atwell

'Teachers as Learners'

Led by such renewed interest, a number of organizations—including the A.F.T. and the N.C.T.E.—have created grant programs to sponsor teacher research.

The A.F.T.'s decade-old program, launched by a federal grant, is aimed at disseminating research knowledge to teachers, explained Lovely Billups, the program's director. As a "spin-off," she added, the union provides funds for teachers to conduct their own projects.

"Not every teacher wants to go out and do her own research, and not every teacher wants [only] to get research from other people," Ms. Billups said.

The U.S. Education Department is also considering a program to fund teacher-research projects, according to Nelson Smith, director of the office of programs for the improvement of practice in the department's office of educational research and improvement.

Mr. Smith noted that the O.E.R.I. hosted a conference, held in Washington last week, to examine teachers' needs for such a program.

Several local districts have also sponsored research by teachers. In Fairfax County, for example, the district has offered interested teachers in six schools both the opportunity to conduct experiments in their classrooms and release time to enable them to analyze their results.

Among other projects, the teachers have experimented with cooperative learning and tried different methods of grouping students, according to Mr. Endo. Others have followed a small number of students over the course of a year to determine when students are paying attention in class and are motivated to learn, he said.

In addition to the school-based project, the district has teamed up with eight neighboring districts and George Mason University to create the Center for Applied Research and Development. Teachers involved in the project meet with university researchers to plan projects—such as studying the effects of implementing cooperative learning or collaborative decisionmaking—and then carry them out in their schools, according to Mr. Endo, who serves as the center's associate director.

Although there is little hard evidence about the success of such efforts, the teachers involved say they have been effective.

"They are doing things differently [in their classrooms] than they did two years ago," said Mr. Endo.

Ms. Atwell, whose book outlined her efforts to create "literacy environments" to promote 8th graders' reading and writing abilities, said teacher research has benefited students, teachers, and the profession as a whole.

"It made [students] interesting to me," she said. "I fell in love with my students, and I had been teaching for 10 years. I learned what they could do."

At the same time, "kids have the benefit of seeing teachers as learners," she added. "They never stop being curious."

Teachers also gain by being able to contribute to the knowledge base, Ms. Atwell said.

"We're not waiting for someone on high to tell us what research shows," she said. "It's the perfect antidote to teacher burnout."

'It's Two Jobs'

Despite such enthusiasm, however, teachers continue to face numerous obstacles in trying to conduct studies in their classrooms.

One problem is that most teacher-preparation programs provide little training in research, noted Ms. Levine of the A.F.T.

"There are vast disjunctures in the way teachers are educated and acculturated in the school system, and the expectations we are talking about," she said. "There are some examples of places that have tried to educate teachers in different ways, but we have a long way to go in teacher-education programs. They were designed for a different model."

School administrators often fail to allow teachers the flexibility to try new methods, said Ms. Atwell, who this fall started a new private school intended to serve as a research and demonstration center. *(See story, this page.)*

"My principal listened," she recalled of her previous school experience. "He believed in teachers as learners. That's not a common characteristic among administrators."

Perhaps the greatest handicap to teacher research is the lack of time

Continued on Following Page

Continued from Preceding Page

needed to record data and analyze it, said Charlotte Higuchi, a language arts teacher at Farmdale Elementary School in Los Angeles, who conducted several studies with grants from the A.F.T. and the N.C.T.E.

"I could not ask [all teachers] to spend the money, time, and energy it takes to do this," she said. "It's two jobs."

But Ms. Levine said that improvements in teaching that research can produce more than make up for the time it takes to conduct the experiments.

"The economies of teaching are so poor that any strategy to improve it is worth doing," she said.

Brokers and Collaborators

In addition to facing institutional constraints, teacher-researchers also face skepticism from much of the research community.

Reflecting a common view, Mr. Wise of NCATE—who was for years a prominent researcher for the RAND Corporation—said it would be unrealistic to expect all teachers to be able to conduct research.

"That's not a realistic or necessary course of action to pursue, any more than it is to expect all physicians to do research," he said.

Teachers can play roles in research by helping disseminate research findings, noted Mr. Sroufe of the American Educational Research Association.

"You can't do research to improve education that's independent of the education system," he said. "No matter how good it is, if it's inaccessible to teachers, it will have no effect."

One way of aiding dissemination, he suggested, is to have teachers serve as "brokers" to communicate research findings to the rest of the faculty.

"Having A.E.R.A. journals in the faculty lounge isn't going to do much," he said. "We need a broker. Teachers can do that."

Teachers are also ideal collaborators in university research projects, added Andrew C. Porter, professor of education at the University of Wisconsin at Madison.

Mr. Porter recalled that, as co-director of the Institute for Research on Teaching at Michigan State University, he frequently asked teachers to join with researchers on a number of studies.

"The university brings to the table the knowledge of the discipline and research methodologies," he explained. "The teacher brings to the table the wisdom of the practitioner."

Such collaborations enhanced both the quality of the research project and its usefulness to practitioners, Mr. Porter said.

"They made especially important contributions at the time of evaluating and interpreting the data at the back end," he said, "and in identifying important research issues—and making sure they were tied to practice—at the front end."

'Soft Data'?

Many researchers draw the line, however, at having teachers conduct formal studies themselves.

"Research in the classroom is not the most fruitful," said Mr. Porter.

There appears to be some "perestroika" in the research community, observed Gerald W. Bracey, director of research and evaluation for the Cherry Creek, Colo., school district. But many traditional psychologists, he added, consider teachers' work "not research."

Frequently, Mr. Bracey noted, teacher-researchers use a kind of qualitative analysis that describes in detail student behavior, rather than methods that depict statistical links between instructional practices and student outcomes.

Compared with research on a large data base, such studies provide a limited perspective, said Mr. Sroufe. As a result, he maintained, teacher-generated studies can seldom be generalized to apply to other schools.

"High School and Beyond data is based on 90,000 students, and it has 123 variables you could study on computer tape and analyze," Mr. Sroufe said, referring to the federally funded longitudinal study begun in 1980. "In a school, you can have a few ideas and demonstrate them. That's important, but it's only one part of the research enterprise."

Teachers also lack the kind of objectivity needed to study classroom practices, said Mr. Sroufe.

"Schools tend to be advocating things," said Mr. Sroufe. "It's hard to be objective toward something you're advocating."

But while such concerns may be valid, they are not unique to teacher-led inquiries, responded Sharon Robinson, director of the National Education Association's National Center for Innovation in Education.

"Biases are unavoidable," she said. "Your perspective gives you one no matter what."

Ms. Higuchi of Los Angeles also argued that teachers' data are often more valid than the kind quantitative researchers use.

"The criticism that this is 'soft data' amazes me," she said. "It's the same kind of data Dian Fossey used with gorillas. It's rich, it's diverse, and it captures what happens in a classroom."

By contrast, "a standardized test is information gathered on a particular day, using a single number," Ms. Higuchi pointed out. "It misses so much."

Ms. Atwell said that the response she has received from her award-winning book suggests that her style of research is valid, and applicable to a wide range of classrooms.

"My book sold well over 100,000 copies," she said. "I don't think teachers, or people interested in research, see it as limited. I've gotten letters from thousands of teachers, from kindergarten teachers to professors of law. They are learning from what my kids taught me."

"Some people prefer teachers to be filters or screens for the work of grownups," she continued. "I don't think it's debatable. The quality of the work teachers have conducted is compelling evidence to me. You have to call what teachers do research."

SECTION 2

CHRISTINE CANNING

Reprinted with permission from Educational Leadership, March 1991.

What Teachers Say about Reflection

Reflection can help teachers stop deferring to the "they" who "know better" to develop their own visions of education.

At the University of Northern Iowa (UNI), participants in our student teaching program—both students and teachers—are always enthusiastic about reflection after the fact, but they are almost always resistant at the beginning. There is always ambivalence and confusion at first about just what reflection means.

In the spring of 1989, our interest piqued by this confusion, selected teachers of the Waterloo UNI Professional Teaching Associates Cadre.[1] chose teacher reflection as a topic for collaborative research throughout the next year. To explore and describe how reflection felt from the perspectives of those who were doing it, we engaged in reflection: reflected on our own reflection experiences: and interviewed each other, our student teachers, and colleagues who were enrolled in graduate courses or workshops in Waterloo where reflection was taught, practiced, and studied. Before reporting how our teachers and student teachers experienced reflection, I will describe how I have come to teach the concept in our program.

Active Reflection

John Dewey, whose ideas are the basis for much of the current thought about reflection, described it as "behavior which involves active, persistent, and careful consideration of any belief or practice in light of the grounds that support it and the further consequences to which it leads" (Grant and Zeichner 1984, p. 4). We have anchored our curriculum in this concept of "reflective action" (Dewey 1933).

In their article "On Becoming a Reflective Teacher" (required initial reading for our students and teachers), Carl Grant and Kenneth Zeichner (1984) discuss reflection-enabling attitudes that Dewey identified years ago: open-mindedness, responsibility, and wholeheartedness. They also suggest an agenda or a line of questioning for anyone who would become a reflective teacher: beliefs and assumptions; consequences, intended and unintended, for self and children; consequences in the social order, global community; knowledge and skills needed to implement beliefs and values in teaching; how ideas generated by self and/or others filter through one's own set of priorities; and one's resulting reasoned choices.

My assumption is that when each person is ready, he or she has access to the questions as well as the "answers" needed for the challenges of his or her own life

From this agenda, I derive questions I can use to push students along through the initial phase of their journey. My assumption is that when each person is ready, he or she has access to the questions as well as the "answers" needed for the challenges of his or her own life, and in reflection these are internally uncovered and integrated into the subjective fabric that is that person's self-concept and worldview. Several other models influence how I go about teaching reflection:

- Taxonomy of Teacher Reflective Pedagogical Thinking (Simmons et al. 1989);
- Bloom's Taxonomy (Bloom 1956);
- Louis Raths' model of values development (Raths et al. 1966);
- a set of developmental affirmations developed by Jean Illsley Clarke and others (1986); and
- characteristics of helping relationships as discussed by Carl Rogers (1980).

Drawing on these sources, I give the

where such directives are merely received and implemented. In reflection, however, the teachers began to develop a sense that they *had* individual voices—voices that are important and should be expressed. "I may not be able to change decisions made in the district," one teacher told us, "but now I know what I'm thinking, and I *can* make decisions in areas where I do have some control, like how I feel about the things I'm told to do and how I will actually implement them in my own classroom."

Rambling and Resolution

The student teachers always had trouble getting their writing started. Procrastination was common, and it was typical for them to "ramble." But we found that growth was often a product of the ramblings, questions, and explorations. One student offered this description: "I just ramble until all of a sudden two or three words will fit together and key something. Then I realize that's it. That's where I'm having the problem. And then I can go with that."

Teachers found they often made connections in their ramblings. Often new ideas would emerge, and other times they were able to focus on something after expressing seemingly unrelated ideas. One student told us: "I would get into what I wanted to accomplish as I wrote, even though I didn't know what that was when I'd started. I'd get more focused as I wrote. At first, everything would come out, but at the end it would be one thing I was thinking about and could expand upon. In the process, I resolved something, got focused, emptied my head onto the paper. It felt good at that point, and I ended up with a direction."

The teachers often started out writing on a topic that was comfortable to write about, such as some professional technique or strategy they were working on, and then made a connection to a second topic that turned out to be the "real" issue. While they often ended a given assignment with a resolve such as "This is what I need to do now," they seldom ended with a specific decision to implement a particular idea. "This is what I need to do now" more often referred to a question to pursue, a first step in a new direction, a new way of seeing a person or situation, or how they would approach a situation in the future. After reflecting on the concept of collaboration for several weeks, for example, Helen Melichar wrote, "I see things differently now. Because I see things differently, I guess I'll probably *act* differently. I know I'll be thinking differently from now on."

More often than not, reflection resulted in more questions. One teacher said, "Sometimes I think it's reflective when you *don't* reach a solution. You explore all the alternatives, and you have this feeling there is no answer. But maybe in three or four days or three or four weeks, there's an 'Aha!'"

The teachers and student teachers felt vulnerable and uncertain as they approached unsettling questions about their teaching; happily, they found a payoff in clearer perceptions of themselves and others and in better plans for solving their own problems.

Dialogue, Questions, and Prompts

Several teachers reported they learned to ask the questions for themselves, with reflection taking the form of an internal dialogue. Helen Melichar said, "It is the questioning that I find most significant to reflection. The questions force a deeper look and keep me from being superficial. If the questions are the right ones, I begin to grow. I feel a little tug, almost a painful little exposure, when the questions are what I need them to be."

For Dede Preston, the questions never changed. "I just need to hit those key questions," she said. "*What's going on here? Is that significant? What makes you say that? What do you want? Does that scare you? Have you ever thought about such and such*

Reprinted with permission from Journal of Reading, December 1989.

SECONDARY PERSPECTIVES

Classroom action research: The teacher as researcher

Teachers traditionally think of research as belonging to universities and statisticians. However, classroom teachers are learning that informal types of research carried on in their classrooms can provide a practical way to identify effective ways to improve teaching and learning. Classroom research is used to solve problems and to determine if new methods and techniques work.

> Instructional decisions are best made by teachers who conduct research in their own classrooms. They analyze the performance of their students. The classroom becomes a collaborative community of literacy research where teachers and their students have permission to reflect, analyze and problem-solve about instruction.
>
> International Reading Association, 1988

Action research is carried on daily by classroom teachers. To investigate issues of interest or concern and to use the results in future practice, teachers are constantly watching and listening. This type of research helps teachers explore in a focused way what works with their students or discover if a problem will be solved by changing something in the classroom environment. The goal is not to publish the work in major research journals, but to conduct these experiments to see what can make a difference in students' learning.

Students, too, can become researchers using a variety of activities to find which learning strategies are most effective for them and to prove to themselves what helped them learn best. They become more aware that they are in control of their own learning and become more independent.

You already do research in your classroom daily as you make instructional decisions by watching and listening. You learn by focusing on daily events. Through careful observation and listening, teachers and students become a collaborative community of learners.

Any time you try an experiment with one group in the classroom and set up another group as a control for comparison, you have the foundation for research. When you decide a method worked or didn't work as judged from the results, you have done some classroom research.

Classroom action research may be as formal or informal as the teacher chooses. It may be done alone in the privacy of the classroom, or teachers may prefer to collaborate with a university educator or other members of their faculty or district staff. Collaboration provides a support network that helps identify problems, plan how to implement the experiment, encourage when spirits lag, discuss snags that arise, collect data, and objectively analyze results.

BEST COPY AVAILABLE

seeking answers. Instructional change occurs as a natural outgrowth of your reflections and data collection. Discussing and focusing on this convincing evidence helps teachers become powerful agents for change.

Sources of more information on teachers' classroom research

Brownlie, F. (Ed.). (1988). *Teacher as Researcher, 3*, 1.

Gaskins, I.W. (1988). *Helping teachers adapt to the needs of students with learning problems.* Paper presented at the International Reading Association annual convention, Toronto, Ontario, Canada.

Hovda, R.A., & Kyle, D.W. (1984). Action research: A professional development possibility. *Middle School Journal, 15*, 21-23.

Mckernan, J. (1988). Teacher as researcher: Paradigm and praxis. *Contemporary Education, 59*, 154-158.

Mohr, M.M., & MacLean, L.M.S. (1987). *Working together: A guide for teacher researchers.* Urbana, IL: National Council of Teachers of English.

Monahan, J. (1986). Classroom action research. *Teacher as Researcher, 1*, 2.

Patterson, L. (1985). Becoming a teacher/researcher: Another avenue to excellence. *English Journal, 74*, 989-1002.

Pine, G. (1986). Collaborative action research and staff development in the middle school. *Middle School Journal, 18*, 33-35.

Santa, C.M. (1988a). Changing teacher behavior in content reading through collaborative research. In S.J. Samuels & P.D. Pearson (Eds.), *Changing school reading programs* (pp. 185-204). Newark, DE: International Reading Association.

Santa, C. (1988b). Teachers as researchers. In D. Buehl & J. Devine (Eds.), *The Exchange: The Newsletter of the Secondary Reading Interest Group of IRA*, Winter.

Santa, C., Isaacson, L., & Manning, G. (1987). Changing content instruction through action research. *The Reading Teacher, 40*, 434-438.

Tucker, D. (1988). Bridging the gap by developing teacher researchers. In *Teacher as Researcher, 1*, 6-7.

Ward, B.A. (1984). Do you think of yourself as a teacher-researcher? You should! *American Educator*, Fall.

Secondary Perspectives is prepared by the Reading/Language in Secondary Schools Subcommittee of IRA. Articles may be reproduced for distribution or publication. Send comments to **JR editor, PO Box 8139, Newark, DE 19714-8139, USA.**

BEST COPY AVAILABLE

Reprinted with permission from Language Arts, Volume 65, Number 7, November 1988.

Halls of Mirrors: The Introduction of the Reflective Mode

Margaret Anzul
Margot Ely

This is a memoir in two voices. One is that of Margaret, a teacher researcher who has spent the past several years growing into that role. The other is that of Margot, a teacher of teachers and a researcher, who acted as mentor throughout Margaret's research project. In the reminiscences that follow, you will hear each of us speak separately about our roles as we consider our mutual growth as reflective professionals. We have chosen this style of presentation so that you, the reader, may see our interactive endeavors reflected from the distinct points of view of each of its participants. Throughout, however, we have worked together on all aspects of this article.

Mirror! Mirror!

Margaret

It is ten years now since I began to reflect seriously upon my own teaching. I had been working for a number of years as an elementary school librarian in a suburban community, had developed well-received programs around literature discussion groups in my schools, and had reached a professional plateau that offered me the security to consider my situation and to set myself new goals. I realized that I would like to improve the quality of discussion in my literature groups, to encourage the students to express themselves at greater length, to explore their literary experiences in greater depth, to be more spontaneous, to talk directly to each other. Two things happened during that year of 1977–78 that were to have far-reaching effects on my professional growth as I was mulling over these concerns: I began to audiotape some of my students' discussions, and I decided to take a few graduate courses.

I started the taping because I wanted to capture the fascinating ideas the children sometimes expressed in their discussions. As I saw growth in them, I wanted to record it. At this time, I was quite unaware of the growing body of theory and research in reader response to literature. I knew little about educational research, and what I knew was neither particularly interesting nor relevant to my concerns. I had no inkling that the seeds of my own future research lay in those tapes.

For years I had avoided supervisors' invitations to permit myself to be videotaped or audiotaped. I was deeply afraid to face what I feared I might see. Now, however, although that was not my primary purpose, as I began to work with the audiotapes I began really hearing myself as a teacher for the first time. A passage from a recent article by Vivian Paley (1986) is a close echo of my own experiences as I, too, discovered the tape recorder:

> The tape recorder, with its unrelenting fidelity, captured the unheard or unfinished murmur, the misunderstood and mystifying context, the disembodied voices asking for clarification and comfort. It also captured the impatience in *my* voice as children struggled for attention, approval, and justice. The tape recordings created for me an overwhelming need to know more about the process of teaching and learning. . . . The search was what mattered—only later did someone tell me it was research.

It seemed necessary to know some other standards of comparison in my search for critical reflection. Glints of how others saw my work in what they said, or did not say, on listening to the tapes. Then I enrolled in Margot's course entitled "Analytical Study of Teaching," and she placed some tools for critique into my hands. I read voraciously that semester. I learned about the research done by Hilda Taba and Deborah Elkins (1950); I learned about Bloom's Taxonomy (1954) and Anderson's (1946) vision of dominative-integrative teaching; I learned about Rist (1970) and about Eisner's (1979) aesthetic criticism; I learned to create my own systems of analysis from data I had collected. These tools—or the pieces of them that I accepted—aided me in my growing reflections about teaching and became the introduction to methodology for future research.

What was I seeing as I studied my own teaching, and what difference did it make? My first conscious step toward applying the new theory to practice occurred not with children but with my adult students at a nearby college. And it was literally a physical step. Having just read about the significance and power of nonverbal expression, I decided to move out from behind my lectern and sit among my students as we discussed a film version of a children's story we had just viewed. It is hard to believe now how self-conscious I felt sitting in the midst of my class, but I could see that the discussion was the most open and extended so far as the teachers considered issues raised by the religious symbolism in Oscar Wilde's *The Selfish Giant*.

With my groups of children I began, sometimes only half-consciously, to model some of the strategies employed by Margot in her classes. I started to say things like: "Carla, you don't seem to agree with Michael. You don't have to talk through me. Talk to each other." Once I had been aware of Margot physically drawing herself back out of direct sight range when two of her students became deeply involved over an issue, I tried the same, sometimes gradually edging myself almost out of the circle, or inventing reasons to slip away and attend to another matter while the children continued on their own.

I had gone beyond my original "few courses" of graduate work and had matriculated in the doctoral program. My taping sessions had developed into field studies and then into a dissertation project. My doctoral research was to document my attempts to translate the transactional theory of literature of Louise Rosenblatt (1978) into the realities of a fifth and sixth grade literature discussion group of which I was the leader.

As I worked at my field studies, part of my task was to write up the results of my experiments with new teaching strategies and analytical schema. My mentor's comments often forced me to examine hitherto unrecognized or unexamined assumptions. It was as disconcerting as it was helpful when Margot questioned why I stated that I had "allowed" my students to do a particular project on their own. It was her position, as it was theoretically my own, that students own their own learning, but in practice it was all too easy to slip into stereotypically teacherly attitudes.

When the Reflective Mode Is Introduced

Margot

I sell awareness. I say it every semester — hopefully and fearfully. Several times. I sit there and say "I sell awareness," and wonder what the students are thinking, expecting, feeling as they nod seemingly in agreement, or write the notes I'll tell them are not necessary. What are we in for? I know one thing. Whatever will happen, we will have highs and we will have lows, and these will have as much to do with my own struggles as with theirs.

If my stance about selling awareness sounds manipulative and authoritarian, that may well be, although it is certainly made public. I have long since given up the idea that teachers must shy away from influencing, even controlling and making decisions about what is to occur. What is more, this false fixation takes us away from what really needs our concern: what do my decisions say about how people learn? In what service are my interactions? How can I help people to become more powerful and people-centered as professionals? How can I help students to own their work, to become increasingly responsible for their lives? I worry far less that I have an impact as a teacher and far more about the quality of that impact.

There is a whole variety of response to my stress on reflectivity, probably more so since I am convinced that this is essential as well as valid across all content. While I should know better, I never fail to be particularly distressed at the start of a course or some other educational arrangement when I see the eyes glaze, the bodies slump, and receive that forceful message sent in so many fashions that this is all too much, this is not what I am here for, please just tell me what to do and how to do it and don't involve me with this nonsense about reflectivity. What powerful social and professional forces have been at work on all of us to accept, to be nice, to not make essential waves, to not think?

Then again, right at the start, usually from a few, comes that instantaneous flash of recognition, that acknowledgement of something felt before, perhaps verbalized before but pushed out of sight for whatever reason, only to be given room to flower now. These are the almost spontaneous mutual celebrators and as much care needs to be given their journey as that of the nonbelievers.

I have learned a few things in attempting to help students develop their awareness. The most potent insight, and possibly the most hopeful, is that students can do a far better job of support, urging, and feedback than can one professor. While I am invited at times to attend their sessions—and often I suspect this is out of distinct politeness rather than need—the doctoral student support groups I once instigated are now self-contained learning communities. They see each other through, often by making greater demands on themselves than I ever put upon them.

In class, creating a climate of mutual support towards reflectivity is more difficult at first. For one thing, I am there, and my roles are active as well as laden down with everything these students believe about professors. What works is more complex to accomplish and certainly idiosyncratic. For me it involves but is not limited to a potpourri of public student feedback, sharing, planning, small group work, student input, timing, humor, a shared evaluation system, individualization. And as I write this list I become increasingly uncomfortable. It sounds trite, uninteresting, obvious. Perhaps the process is better described by some of its impact.

First, it fails with some students. They may be those who choose not to open up, those for whom reflection is too painful or too threatening, those who believe either that they are already sufficiently aware or that such awareness is not particularly useful or those who dislike my style or what I stand for. These failures are hard to take. It helps that I have schooled my ego sternly.

For many, the process evokes deep emotion. The very students about whom this is true say ruefully that more people come to cry in my office than in anyone else's. I buy boxes of tissues. But there is a certain quality to this crying. Often it seems like a release—sometimes a sharing of emotion. Whatever its quality, the result for the great majority of weepers and for me is a renewed bond of collegiality when the storm has abated. There is much laughter also. The point is that to invite people to grow in self-reflection and to offer them some tools is to invite their affective as well as cognitive involvement.

Most students make some progress toward becoming more reflective. It is a progress in which they find delight, pride, hope, justification. Many of those same bored-seeming people at the beginning of a semester become increasingly energized and vibrant. That is sufficient reason to continue, although I realize with sinking heart how faithfully this emerging professionalism needs to be tended within contexts that are often difficult if not antithetical to that idea.

And for me, what about my own personal threshold of dawning awareness? It is made up of honoring the nonequal parts of what I can accept about my own teaching and what I will not—what needs work and changing. So, the song continues.

Margaret

The use of the tape recorder became standard procedure in many of my classes. I made control over it available to the students as well as myself, and began to use it to help them listen to and analyze what they had been doing in discussion. Two of the students, Astrid and Peter, became fascinated with the ways in which this tool extended what they could do. Among other things, they began reading books on their own and meeting over the weekends to discuss them. Then they would bring the tapes of their discussions in to me after school and the three of us would listen to what they had accomplished.

Annette and Cherise joined them. Subtly the discussions changed as Astrid began to talk more, more rapidly, sometimes becoming a bit silly. They were halfway through *Bridge to Terebithia* by Katherine Paterson (1977), and seemed to be going nowhere in their talk about Jess and Leslie at school. After about ten minutes, I reached over, switched off the tape and rewound it. We listened from the beginning, and then I asked the students "What's going on here?" There were a few moments of silent fidgeting, and then Astrid piped up with "I'm dominating."

The introduction of the reflective mode into a classroom or a school sets off ripples and the extent of these cannot always be foreseen. I told my students that I was doing research on how they thought about literature and how we all worked together. That other teachers, or graduate students in university classes, would be interested in what they were doing seemed to give an added sense of dignity and worth to their work. As they watched me analyze not only what they were doing, but sometimes what I was doing, a new sense of freedom entered the discussions. Students felt free to tell me or another student if they thought they were not being allowed to express themselves. And some, like Astrid, began to analyze themselves.

Teaching from a transactional perspective, as Rosenblatt describes it, consists in helping students develop the habit of reflecting upon their primary responses. Students become aware of possible alternative responses and are helped to understand their own preoccupations and assumptions better. This process of reflection may lead students to consider other points of view and may ultimately lead to a revision or broadening of individual interpretations. This phenomenon of expanding student reflectivity centered both on the subject at hand and on the dynamic of life in which it was embedded. Indeed, the strengthening of the students' reflective mode was to me the one prime indicator that progress was being made toward actualizing the transactional perspective.

As I and my colleagues in the doctoral program undertook our various research projects, we formed a support group and began to share the experiences of those of us who were doing naturalistic research in classrooms. One told of a teacher friend who had invited her to observe in his class for her field trials. Although she sat as unobtrusively as possible in a corner and made no comments on any aspects of what she saw, she found that he became increasingly defensive and even argumentative in explaining to her what he had been doing. "That is because you have introduced the reflective mode into that room," commented another member of the support group. "No matter how unobtrusive and nonjudgmental your presence is, it is heightening his own awareness of what he is doing. He is probably not entirely comfortable with his own teaching, and when he seems to be trying to argue with you, he is really arguing with himself over what he is seeing."

It is my experience that once the reflective mode is introduced, this impulse toward examination and impetus to change is inevitable and inexorable. In fact, once the habit of reflection is introduced into a setting, the setting has already changed, however slightly and subtly. People who have never before articulated their beliefs and customs now are asked to do so, and what may never before have been examined has now become verbally objectified, so that it is at least present for examination.

Toward Becoming a Teacher Researcher

Margaret

In a sense I had bitten off a huge chunk. I was a teacher who had trained myself to also be a researcher, designed an educational program, carried it out, studied it as it was underway, continually reviewed and reshaped it in progress, and analyzed what was occurring with both the students and myself throughout. The research project, which was in the naturalistic paradigm, required at the core that I develop alternative visions of classroom life. I needed to have that ability to see what is happening from multiple perspectives.

Much has been written about the social construction of reality, and the extent to which participants in a culture see what they socially construct and maintain as being a natural reality, and therefore inevitable. Participants in a social setting generally not only share in but contribute to this maintenance of the existing culture. A teacher in a school is certainly part of the structure of that setting. My assumptions as a teacher that were part of the cultural construction that I had hitherto taken for granted became one perspective. I then worked to be able to step back and examine my own, perhaps previously unconscious, premises for action from other viewpoints.

This reflectivity, or ability to view whatever data from multiple perspectives, is termed by the Loflands (1984) the "transcendent view." The attainment of this view brings with it "the obligation to examine what had hitherto been taken for granted, to transform 'givens' into 'problems,' resources into topics; to examine the life we lead, rather than just enjoy or suffer it."

Teaching implies an involved interaction with other persons. Research implies as objective as possible a consideration of some aspect of such interaction. Thus, even though tension or competition between persons may be avoided when the two roles are combined in one person, the goals themselves may require psychological states difficult to reconcile. When the researcher's primary professional responsibility is as teacher of the class, the goals of teacher must dominate in school because they involve responsibility for the immediate welfare of the students. It is in the very moments of passion of teaching that all concerned are most likely to forget themselves in their immersion in the experience. Those moments potentially most fertile for research were also those hardest to return to for analysis. They may have been the most memorable to me from my immediate perspective, but because of their richness and complexity they were harder to document and reconsider from other perspectives. The use of the tape recorder or video camera for a teacher researcher in such situations becomes invaluable.

As the project progressed, I eventually found myself alternating the teacher and researcher roles as a matter of course. During some teaching episodes I mentally withdrew from the content of the discussion as a method of analysis of process or of levels of thinking occurred to me. On the other hand, it was not uncommon for me to lay aside an analysis of a transcript to prepare a future lesson plan as insights for teaching occurred. And sometimes I dropped the researcher role entirely as the needs of teaching called.

Assuming these dual roles has become my personal method of choice whether I am considering teaching or the researching of it. Not every teacher is called to do this; it would be an unreasonable and probably unworkable expectation. I do suggest, however, that every teacher would benefit from some experience of research, in order to adopt the self-reflective attitude that is required, and further that every educational researcher needs to spend substantial amounts of time in school settings, preferably teaching in them. It is surely desirable for the two roles to be present in every school, and at times in every classroom. There are many ways in which this can be accomplished, and accounts of them are appearing increasingly in the literature.

Armstrong (1980) describes himself as researcher in a team teaching situation who worked closely with his senior colleague on both his teaching and his research. For a number of years Deborah Elkins worked as the teacher and Hilda Taba as the researcher in collaborative projects (1950). Later Elkins (1976) served as mentor and researcher for other groups of teachers. In *Achieving Literacy*, Margaret Meek (1983) describes herself as the senior researcher working with a group of reading teachers, each from a different school, who taped teaching sessions and met periodically to share these tapes and analyze their teaching and their students' learning. Madeline Lampert (1985) combines an academic career and the teaching of elementary mathematics, and conducts research "from the point of view of the practitioner." And Nancie Atwell (1987) writes extensively of her experiences as a reflective teacher of writing and reading at the junior high school level.

Paying the Price

Margot

We have alluded to some rough spots in the reflective process. And it seems fair here to make some of them public as they have applied to both of us.

There is no getting around the fact that becoming more aware has its modicum of pain. Was that I who interrupted the discussion? How could I have seemed so impatient? Why did my face show such disregard? Why didn't the interaction reflect more thoroughly what I think I believe? What exactly do I believe? Do I believe what I say I believe? Why is this student so withdrawn when the others aren't? Why was my comment received so negatively? What will I do about it?

There are other professions in which cooperative supervision and self-reflection are taken as a matter of course. Our profession still has a long way to go in these areas. And our modes of external and often impersonal supervision do not help. Facing up to one's imperfections, particularly as they impact on the people we teach, is often difficult. Doing something about it is often not as easy as it sounds. And then there is the matter of awareness overload. The whole process is enough to make one pull the blanket over one's head and give up all this reflection, were it not for the fact that it is so gloriously worth it. When it works, and we are reduced to accepting victories in very small pieces, there is a glow quite unique. What we have learned, at least in its most rudimentary stage, is to find as much use and acceptance of our own stumbles and follies as we do those of our students because they tell us what needs doing.

Becoming more reflective has its other problems as well. One of these is that it invariably takes time, more time than we usually give to our automatic routines. That time, while often gladly given, often also cuts into our relaxation, our social lives, our dreams. And last, at least in this article, becoming more reflective breeds a particular sort of loneliness. It is the loneliness of accepting the fact that no matter how much help there may be, in the final analysis reflection is done by oneself. At times too, there is a powerful professional loneliness, especially when there is not at least one other person who is on a similar journey and with whom one can create a support network.

Working Within the Hall of Mirrors

Margaret

Because part of the purpose of my study was to analyze and document the teacher's role during the process of putting a transactional program into effect, I was immersed in reviews of my teaching strategies from the beginning. I read and reread all of Rosenblatt's work, thinking through ways to apply the transactional theory more consistently in my teaching. I also had extensive conversations with Rosenblatt, during which we discussed at greater length points that were not clear to me. In the course of this reading and talking, newly discovered facets of the transactional theory served as mirrors to me of whatever I had been doing in the classroom during the previous weeks. In addition, since I was working with a mentor whose style of teaching was to continually question and probe, even slight and inadvertent comments by her might reveal to me insights about what worked, avenues of teaching I had not yet explored, or gaps between what I intended to do and what was actually being accomplished in my classes.

As I analyzed the class sessions, I found myself either figuratively or literally rewriting some of them. This process at work was continuous and extensive. The practical consequences for me as a teacher were not only that I revised and reworked my teaching strategies as I went along, but also that sometimes much later, in the light of my successive learning, there came quite unexpected fresh insights into what I had done in the past. It was truly like standing in a hall of mirrors, in which each reflection might also play off any of the others. (Because I had been working with that analogy for some time, it was of particular interest to me to find it used by Donald Schon (1983) in *The Reflective Practitioner*.)

The point of figuratively revising transcripts or literally rewriting lesson plans is to incorporate new insights into future lessons. I have selected here three examples from the many available of this process at work. All three are taken from different discussions of *The Witch of Blackbird Pond* by Elizabeth George Speare (1958). This is a historical novel for young people that tells of sixteen-year-old Kit Tyler who comes from Barbados to the Connecticut colony to live with relatives she has never seen. Kit befriends an elderly Quaker woman, Hannah Tupper, who is regarded as a witch by the Puritan colonists, and eventually Kit is herself accused of witchcraft.

The stereotype of classroom interaction is that students ask the teacher questions and the teacher provides the answers. As we discussed "The Witch of Blackbird Pond" there were many questions from the students about attitudes and customs in the Puritan colonies. In my journal notes for January 22, 1986, I had written out some of my reflections on these lessons.

> I have become aware that Richard is using up a lot of our discussion time with his questions: "Why didn't Kit just stay where she was in Barbados? I don't understand why she didn't leave Connecticut if she was so unhappy? Why didn't she just stow away on a ship?" Michael has also tended to go on in this fashion, sometimes monopolizing the conversation. I respond in a typical teacherly fashion, giving answers to all these questions. I'm further impelled by my concern that the children understand enough of the historical background to adequately interpret what we are reading.
>
> I think, however, that this type of interaction works against the transactional view. Even to open up these questions for general discussion can to a certain extent

> go against the children's doing their own imaginative recreations. I need new strategies for this now: perhaps to elicit all of the questions the children come up with and put them on the board to be considered. Perhaps to consider as many alternatives as possible and their consequences before trying to declare what the characters in the novel "should" be doing.

In spite of the thought that I was giving to these concerns, it was many months later before I noticed the following exchange from the transcript for January 24, only two days after I wrote the above lines. Steven asked, "If the Puritans were so good and they loved God, why did they treat someone else of a different religion so poorly, like Hannah Tupper?" My response was "This is something we're not going into right now. But . . ." and I then went on anyway to talk about the intolerance of the Puritans toward other religious beliefs.

When I read this passage over at a much later date, I was distressed by the absurd contradiction in my own answer in stating that I didn't want to go off onto a topic that I then proceeded to talk about. What was I thinking of at the time? Most likely my own nervousness with a topic that touched on religion in a public school setting was coupled with the fact that I had a preplanned destination for that lesson, and a discussion of the Puritans was not part of it. What, precisely, was the nature of the lure that led me off? The response was a "teacherly" one. A child asks for information, and many teachers cannot resist the temptation to share what knowledge they have. My response was of that nature and, it may be noted, imparted information but kept the entire teaching segment at the factual level.

On my later rereading, I saw something quite new—a wonderful opportunity for exploring more deeply into human nature that I had let slip by. Why, indeed, do any of us profess a belief but act contrary to it? Why do we inflict on others the very sufferings that have caused us anguish? If I could rewrite that script, and reteach that class, those are the questions I would invite my students to explore as they enter into the experiences of innocent women caught in witchcraft trials.

It would be sad, indeed, if all I reflected on were lessons I would like to change. I had spent weeks with this group of fifth graders teaching, guiding, and modeling discussion techniques. A few weeks after the previous episode all of our working and learning came together as the children launched into the following passage. Before the talk started, they had been asked to write about whatever they thought was most important in the chapters just completed, and the discussion started as Edward read aloud his paragraph about Kit seeking refuge from her sorrows in Hannah Tupper's meadow.

Mark: It's like if something goes wrong . . . like your mother would take you in with her open arms and this is like the same thing. The meadow took Kit in.

June: She doesn't even have a mother.

Margaret: It's like an old saying, "Mother Earth." . . . precisely

Rachel: She didn't have a mother or a father or grandfather, she just had herself and her aunt. *(Reading from text)* "Thee did well, child, to come to the Meadow. There is always a cure here when the heart is troubled."

Mark: Sometimes I always wonder if Hanna is really a witch because that thing that was always magic to everyone else was . . . the blueberry cobbler.

Steven: No, I don't think so; she's been through so many hardships that she's understanding of a lot of problems of everybody else.

Rachel: Like her with her husband when they first came to that town, they wouldn't take her in, so she knows what it's like to try to make good and everything.

Steven: Yeah, and rejected and everything. And also, she was good, she takes her mind off what her problems are and she'll discuss something else.

Edward: She's just like the meadow. She, like . . . she soothes.

Steven: Hannah was really nice to Kit and I think that she was a better mother to her than anybody . . .

Mark: Hannah was really like her grandmother or something or like a mother.

Rachel: I agree that Hannah is like a grandmother, because some people can understand their grandparents better than their parents.

Miranda: When you get older, you're supposed to get wiser, and she's been through all the experiences.

June: Not all . . . just some.

Mark: Not all, but a lot of them, a lot of major problems.

Edward: And she's really old.

Rachel: She says, "The answer is in the heart, you can always hear it if you listen for it."

The children had analyzed the episode with great insight, working with analogies of their own to illustrate their interpretations. It was class sessions like this one, and they were becoming more frequent, that reinforced me as I continued the work.

The third reflection I would like to describe is of a scene far back in the hall of mirrors. It took place in 1980 in a doctoral seminar taught by a faculty team that included Margot. I was presenting my analysis of an experience with one of my literature groups. The children had been reading novels by Madeleine L'Engle, and I had asked them to talk about the characters in the light of L'Engle's (1972) statement in one of her autobiographical works, *A Circle of Quiet*, "pain can be a creative teacher." Books reflect off each other too, and eventually the children's talk veered to *The Witch of Blackbird Pond*, which they had already read. I had asked them whether they thought that Kit's experience of being imprisoned for witchcraft had been a creative teacher. One of the children, Susan, had quickly responded "No. It was so horrible. If it had been me, I couldn't stand it."

In those days I was immersed in studying various stage theories of cognitive and moral development, and I started to analyze Susan's response in these terms when Margot broke in with "I don't think pain is a creative teacher or ther." Completely disconcerted, I earnestly set about "teaching" my "students" that the novel was structured so that Kit had, in fact, come to know herself and others better through this event, painful though it may have been. Margot said "Oh," and sank back in her chair like a student who is not satisfied but would not press the point. Someone raised another issue and the discussion flowed on. A slight incident, but one that stayed with me, because although she had taken on the role of student, Margot was really teacher and I sensed that she was seeing something that I could not.

Eight years passed, and then one day when I was analyzing another teacher's interactions with "my" children, that small scene shimmered through my mind as though through a dozen intervening mirrors reflecting if off each other. Suddenly I was seeing what Margot had seen, and I began to act out in my imagination a new ending to that exchange.

Again I read aloud the passage by Madeleine L'Engle in which she says that pain can be a creative teacher. Again our group talks about whether this could be true for Kit. Susan says that she doesn't think so because Kit's experience in prison had been so horrible that she, Susan, couldn't stand it. Again Margot says that she doesn't think that pain is a creative teacher either. This time I lay my book aside, and I lean forward and I say, "Margot, tell us about that."

Margot's Coda

It seems fitting to end here with what I consider to be the most powerful and energizing fact in this entire business—and that comes from looking within. We know far more than we think we know. I am certain that most of us know at some central level how people best learn, and therefore how people best teach, because we have lived it all of our lives—formally and informally. The trouble is that so much other static is in the way. Many of us are as beset by someone else's goals, curricula, textbooks, routines, vision of education as we are by our own unexamined assumptions, automaticities, and lethargy. But when it is possible to clear a space, it becomes possible to think about a phenomenon in purer, perhaps simpler, ways. How does it feel to be in the lowest reading group? How does it feel to be in the highest and to know someone else in the lowest? What is the impact of being labelled by a test score? What does it mean to be educationally gifted. How does it feel to do work you already know how to do? What are the consequences of not making important choices about your own education? And on and on. We all know, because we've been there. Many of us are there now, in our graduate work.

The reflective practitioner makes a space. And while that space gives no guarantees, it allows us to think again, to do again, and, slowly, to breach the stagnant moat between what most of us do and what most of us know we should do.

References

Anderson, H. H., and Brewer, H. M. *Studies of Teachers' Classroom Personalities. II. Effects of Teachers' Dominative and Integrative Contacts on Children's Classroom Behavior.* Applied Psychology Monographs, No. 8, 1946.

Armstrong, Michael. *Closely Observed Children: The Diary of a Primary Classroom.* London: Writers and Readers, 1980.

Atwell, Nancie. *In the Middle: Writing, Reading and Learning with Adolescents.* Upper Montclair, N. J.: Boynton/Cook, 1987.

Bloom, Benjamin. *Taxonomy of Educational Objectives. Part I: Cognitive Domain.* New York: Longmans, 1954.

Eisner, Elliot W. *The Educational Imagination.* New York: Macmillan, 1979.

Elkins, Deborah. *Teaching Literature: Designs for Cognitive Development.* Columbus, Ohio: Merrill, 1976.

Lampert, Madeline. "How Do Teachers Manage to Teach?" *Harvard Educational Review,* 55(1985): 178-194.

L'Engle, Madeleine. *A Circle of Quiet.* New York: Farrar, Straus and Giroux, 1972.

Lofland, John, and Lyn H. Lofland. *Analyzing Social Settings: A Guide to Qualitative Observation and Analysis.* 2nd ed. Belmont, Calif.: Wadsworth Publishing Company, 1984.

Meek, Margaret, et al. *Achieving Literacy: Longitudinal Studies of Adolescents Learning to Read.* London: Routledge & Kegan Paul, 1983.

Paley, Vivian Gussin. "On Listening to What the Children Say." *Harvard Educational Review,* 55(1986): 122-131.

Paterson, Katherine. *Bridge to Terebithia.* New York: Crowell,1977.

Rist, Ray C. "Student Social Class and Teacher Expectations: The Self Fulfilling Prophecy in Ghetto Education." *Harvard Educational Review,* 40(1970): 411-451.

Rosenblatt, Louise M. *The Reader, the Text, the Poem: The Transactional Theory of the Literary Work.* Carbondale, Ill.: Southern Illinois University Press, 1978.

Schon, Donald A. *The Reflective Practitioner: How Professionals Think in Action.* New York: Basic Books, 1983.

Speare, Elizabeth George. *The Witch of Blackbird Pond.* Boston: Houghton Mifflin, 1958.

Taba, Hilda, and Deborah Elkins. *With Focus on Human Relations: A Story of an Eighth Grade.* Washington, D. C.: American Council on Education, 1950.

Margaret Anzul is school librarian in the Madison, New Jersey, Public Schools and teaches at Fordham University. Margot Ely teaches at New York University.

Reprinted with permission from Language Arts, Volume 65, Number 7, November 1988.

The Light at the End of the Journal: A Teacher Learns About Learning

Margaret M. Voss

A number of years ago, I attended a lecture on learning styles. Though the speaker was provocative, articulate, and entertaining, I left uneasy—almost depressed—as I left the auditorium. Around me, people chattered, explaining to each other which of the six (or was it eight?) "learning styles" they fit. Overhearing them, I realized that one or two of the categories were definitely trendy and others definitely were not. Yet my discomfort was not that I fit one of the unfashionable labels, but that I didn't seem to fit *any* of them. How *did* I learn, anyway? I wasn't really sure.

In the ensuing months and years, I would sometimes chat with a colleague about her learning and mine ("I'd rather hear a lecture than read a text; you can ask questions of a teacher" or "I need to take notes in order to remember"). But my discoveries about my learning were few and superficial.

Then one summer I discovered journals.

I had gone in July to Northeastern University's Martha's Vineyard Summer Workshops to study with Nancie Atwell and Mary Ellen Giacobbe about writing process and its relationship to reading and learning. There, as suggested by the instructors, I kept two journals. In my classroom journal, I responded to assignments given by Atwell and Giacobbe, listing ideas and questions, summing up feelings, reviewing past experiences, documenting new knowledge.

In addition, I kept a double-entry academic journal as part of a course project, original research on a topic related to Martha's Vineyard. In that journal were two columns. On the left I wrote my fieldnotes—the actual procedures followed, information gathered, questions asked. On the right, I analyzed the learning process demonstrated on the left, commenting on the strategies I'd used, my thoughts about the learning process itself, and feelings of doubt, excitement, frustration.

At the end of the course I reread both parts of this academic journal (and the classroom journal, as well) to see what I could learn about myself as a learner. My discoveries not only clarified the processes and strategies that I employ as I learn, but led me toward new processes in my teaching.

I would like to thank Nancie Atwell and Marcia [illegible] for their helpful suggestions on an earlier version of this manuscript.

Order from Confusion: Strategies That Help

I like order. Unfortunately (or maybe fortunately), learning does not necessarily proceed in organized, linear fashion. At the beginning of the research project, I could legitimately claim to look forward to immersion in the project, to the stimulation it would offer. I wrote in my journal:

> While I've tried to teach my students to go beyond encyclopedia and text, I myself have seldom used primary sources and interviews. I hope to have the chance to plunge into that kind of research—that immediacy, depth, experience, rather than the superficial kind of collecting and parroting back facts.

But choosing and shaping my own topic ("plunging in") was harder than I'd anticipated. From the beginning, I looked for ways to make the subject—and my learning—more manageable and orderly. As I hunted for my research topic, I recorded in my journal:

> I keep expanding, focusing, trying something new, expanding, focusing, etc. I'm depressed! This is like the first couple of drafts when I'm writing an essay, before I've discovered my topic. . . . But notice how many little things I'm learning . . .

And I listed them. Eventually my brainstorming and listmaking led me to my topic—the history of West Chop Lighthouse.

I made lists for all occasions. Questions to ask at an interview. Information gathered. Sources to try. Things to do next. I sometimes even jotted lists of points to include in the entry I was about to write. Listing settled my thoughts, put them in order, helped me remember what I planned to say. Frequently I'd go back and prioritize the items on my list, rearranging, adding or omitting items. I revised my lists to clarify important points and make plans for myself.

Listing. Such a simple technique yet so significant to me as a learner. I had not realized it before and certainly had never thought to point out to my students (except as part of a lesson on notetaking) ways that listing might help them.

I do now. I encourage my students to list ideas to write about, questions to investigate, skills mastered, books read, points to include in answers to essay questions, anything that will help them learn.

In my research project, I used other graphic strategies to organize my thoughts. I drew webs or maps on paper or in my mind, not only to help myself generate new ideas but to see relationships among them. I spent an afternoon reading old news articles about my topic and I noted later:

> As I worked, I kept networking in my head, thinking of other possible sources. Ms. Regan, the librarian at the *Vineyard Gazette*, had said she'd get me related files if I wanted any, so as I read, I looked for other things I could look up. I pictured threads stringing together the various topics, forming chains of names and places. . . .

I categorized information. As I accumulated information about the lighthouse's history, I found the dates confusing. So I made a time-line, adjusting it as I gained more information. Not only did this provide me with a sequence, thereby giving me a better handle on the history of the lighthouse, it pointed out some conflicting information and the need for more research.

Atwell and Giacobbe suggested another strategy so simple that I wonder it had not already been obvious to me: numbering the pages of my journal and making a table of contents. Now I recommend that to students all the time—not only as a timesaving way to locate information, but as a way of reviewing and synthesizing material.

Nowadays when I teach, I share with students the strategies I use to make sense of my learning, as a way to help them make sense of theirs. I describe, demonstrate, and suggest all kinds of strategies for them to try in their own writing, notetaking, and journals: listing, prioritizing, categorizing, mapping, summarizing, graphing, drawing charts and diagrams, making indices and tables of contents. I ask students to share their strategies with each other, no matter how simple or insignificant they may seem. They share ideas on ways to insert information (asterisks, cutting and taping, arrows); ways to organize thoughts (color coding, special labels); ways to remember information (rereading, telling it to a friend, relating it to something else); and any number of strategies and techniques, mundane or unusual, that help them—and may help others—to make some order out of confusion. As Goodman (1982) says, learners "must come to be able to appreciate their own strengths, to recognize the productive strategies they already can use, and to build positively on those."

Further Discoveries: Making the Meaning Mine

Bringing order to information is not enough. I found that I use many strategies to personalize information, to connect it to other things I know, to make it truly mine.

I visualize as I learn. When someone tried to explain to me how he had lit the old kerosene lanterns in the lighthouse, I recorded in my journal:

> I had trouble picturing the kerosene light. Where was the wick? He told me how he'd light it and I'd repeat back to him what he'd said, but I still didn't see it in my mind and I couldn't seem to ask the right question that would get me the information I wanted. Finally he said, 'You know on a Coleman lantern ' and I had something more to go on. Still, I'm unclear. I need to go back to that lighthouse book. Maybe that'll help. Wish I could see a sketch. Maybe I should hunt up a Coleman lantern.

Not only did I try to visualize in order to integrate new information, I also rephrased and repeated information in my own words in order to be sure I understood it. Whenever I talked to someone, I found myself doing that—the oral version of notetaking in my own words. It helped me to make the meaning mine.

Actual visual aids helped more than visualizing in my mind's eye. Three different people had explained to me that the lighthouse's red sector warned of

BEST COPY AVAILABLE

shoals off East Chop, but it wasn't until someone showed me his nautical charts that I understood what he was talking about. I'd been picturing an entirely different location and I hadn't understood the angle of the beam. What an exciting moment of discovery when it all came together!

In my Vineyard research, I found that whenever I interviewed someone new, I was comparing his or her information with the information I'd learned from other interviews and articles, using that prior knowledge to confirm facts or to spark new questions. I called on prior knowledge so continually and instinctively that I seldom even realized I was doing it. Yet it helped me as much as visualizing did; in fact, visualizing is one form of calling on prior knowledge. As I read articles, took notes, and conducted research, I connected my new learning to memories of my previous learning and teaching: phrases such as "This reminds me of . . ." or "Just like the time . . ." spring up throughout my journal. When I visited West Chop Lighthouse, I thought of two lighthouses near my home, comparing them to West Chop. By personalizing new information in this way, I internalized it and learned it.

As a result of these realizations about my learning, I teach differently. I have added a batch of questions to my repertoire and I find myself using them often:

What do you want to find out? Why?
What does that remind you of?
What do you picture when you write/read/hear that?
What memories or episodes from your own life come to mind as you work on this unit of study?
How does this relate to other information you have on the subject?
What visual aids can we use here?
What is your opinion, reaction, question, prediction?

In short, I try to get learners to connect themselves to the things they are studying.

Learning by Writing

My journal writing not only led me to discoveries about how I learn; it *helped* me learn. It offered a way to think things through, to plan, to question. I used it to analyze an interview I had conducted, writing three pages of comments ranging from my strengths and weaknesses as an interviewer to my thinking process as I conducted the interview. That led me to improve my interviewing procedures. One day, I noted: "I'm chatting, not interviewing. I realize I need to focus my main idea so I know the questions to ask." And the next day I elaborated:

> I'm a bit weak on organization and preparedness. . . . I need to plan more, but not *too* much. I don't want to be tied exclusively to my list of questions. Just a few

> major questions and practice in good follow up might be enough. Have a supplementary list available, perhaps, in case I get stuck.

In the journal, I made connections between writing, learning, and teaching. Near the end of the course, I wrote:

> No problem with the interview today. I've gained confidence through practice (rehearsal first, then doing, then redoing)—aha! It's just like the writing process, which is really the learning process. That's why I need to give enough time to kids, along with more opportunities to try doing things in different ways.

Writing in class was valuable, too. In the classroom journals (separate from my research journal), Atwell and Giacobbe frequently asked us to do free writing. We explored a variety of things: our expectations for the course, our own teaching histories, relationships between reading and writing, reactions to readings and class discussions, and other topics. Many of the most lively class discussions followed these sessions of free-writing. Early in the course, after a free-writing session on how we learned to teach, everyone seemed eager to share an observation of an influential childhood experience, a mentor, or a trial-and-error experiment. The room reverberated with comments such as, "That's just like what happened to me," or "I hadn't really realized until now . . . ."

Journals have become part of my life. I keep a regular journal at home in which I record anecdotes and information about my young son. As a result I've learned about his learning (Voss 1988). I keep an occasional journal of my teaching and learn from that. For example, when most of the first graders in one class suddenly began collaborating with each other on original stories, I wrote about it in my journal and discovered some of their discoveries—and became more aware of the kind of help they needed from me.

In my teaching, from first grade to graduate courses, I push journals. In journals, students can record personal reactions, comment on field trips, respond to discussions, relate the subject matter to another reading or personal experience, state an opinion, ask a question, make a prediction. In short, journals offer students the opportunity to connect new knowledge to their own memories and understandings . . . to find real meaning.

The Learning Community

The Martha's Vineyard course offered another plus which I recorded over and over in my journal: a real learning community. Course participants were housed together, so there were plenty of opportunities to share ideas, try out theories, examine questions. My friends and colleagues helped spur on my learning.

On the second day of research, I wrote:

> This afternoon as we chatted on the porch, I was struck with how quickly we'd become a community. We were sharing resources, commenting on leads, sharing each other's excitement, making suggestions. This helps me, keeps me going. It

> both spurs me on through competition (seeing how I'm doing compared to others) and through support ("That's a great idea, Peg, try that.") I also like having something to offer others. It feels good to help and I find I'm learning about their subjects and it's *interesting*. This is like a writing group; it's a research community. I want more of this feeling—"We're all in this together"—in my profession as well as in my classroom.

When I did not have the classroom community, I asked friends or my husband to respond to my thoughts. Sharing ideas helped me develop ideas.

Even before that summer, I had been running writing workshops in my classes and providing students with opportunities for response from me and from their peers. But when I saw and felt how positively my colleagues affected my own learning, I resolved to work even harder to build that sense of community into my classroom and into my work with fellow teachers.

Recently, I taught a graduate course in which I tried to develop that sense of camaraderie and collaborative learning that I had found so stimulating. Teachers researched professional topics of interest to them, talked to each other as their work progressed, suggested resources and loaned books, and read and responded to final projects. Sometimes I felt hesitant about asking adults to do things I routinely ask children to do, such as interviewing each other or writing a ten-minute letter to a classmate summing up last week's class. But those types of activities were uniformly popular. At whatever age, we need opportunities to communicate with each other in a variety of ways, to learn together.

I learned about learning through my journal. I still don't know how to label my learning style, but that's fine with me. I know many of the strategies that I already use to learn and I'm open to others. I'm more aware of the things I do to connect my learning to the rest of my life. I try to make students aware not only of *what* they learn, but *how* they learn, alone and together. And, of course, to help us, we all keep journals.

References

Goodman, Kenneth S. "Revaluing Readers and Reading." *Topics in Learning and Learning Disabilities*, January, 1982.

Voss, Margaret M. " 'Make Way for Applesauce': The Literate World of a Three Year Old," *Language Arts*, 65(1988):

Margaret M. Voss is a writing specialist in the Marblehead, Massachusetts, Public Schools.

Reprinted with permission from Practitioner Research in
School, The Falmer Press, 1990.

Chapter two

Why do Pirates have Peg Legs?
A Study of Reading for Information

Doreen Gregson

Background to the Research

> *School Visit, 1986: Monday 9.30am: Reception class in an infant school*:
> 'Huh!' voices the teacher to a small group of children sitting on the mat dutifully gazing at a flash-card with the letter 'h' on it. 'Huh is for hat. What is huh for?'
> Replies straggle in; the teacher presses for a more concerted effort. Gazes begin to wander . . . to the pictures on the wall . . . out of the window . . . to the jumper in front which has such an interesting pattern that one traces over it, making the occupant wriggle . . .
> 'HUHMARKWHATISHUHFOR?'

In the course of many years as an advisory teacher for reading and language I have witnessed this scene countless times. The role of observer enables one to stand back and question materials and methods that one has previously taken for granted; the role of team colleague working alongside others who are equally interested in the development of language and literacy enables debate and the formulation of grounded theories; the building of trust in the schools where one works enables the testing and modification of such theories by working in collaboration with class teachers.

What follows is an abridged account of one such collaboration. Maria Martin, a teacher of a class of 10–11 year olds, shared my enthusiasm for developing reading within the general curriculum. In particular, we were interested in the use of study skills, and widening the teaching of these to encompass children who had basic literacy problems.

Together we formulated an action-research project. Maria maintained overall responsibility for everything which happened in the classroom. She decided on the theme of the topic and we planned the literacy programme within this framework. The responsibility for teaching varied: sometimes we worked alongside one another; at times one took the teaching role and the other observed; when the children seemed totally perplexed and we could not see a reason for this one of us would work as a pupil alongside the class in order to share their experiences more fully. I produced any reading material which was thought necessary. I also kept detailed research diaries, which included transcripts of taped interviews and discussions with the children, recorded both during the teaching programme and in the following term (see Gregson, 1987).

It is important in any kind of team teaching that there is a common philosophy and shared aims, and that members are relaxed when working together. Maria and I were referred to in school as Little and Large, in reference not only to our relative physiques and our joint performances, but also because fortunately we could both see the funny side of situations which were fraught.

City Road, the school in which we worked, has a high proportion of bilingual children. By the age of 8 or 9, the only easily discernible language difference between them and the monolingual English speakers is one of accent. I was uncertain whether the problems which we encountered were due to the second language factor as they seemed equally represented in all ethnic groups. I felt it important to test this by repeating some of our work, but in a totally dissimilar school, before starting the main study. Interestingly, a similar picture did emerge from this pilot project.

The research question for the main research was as follows:

> What picture of the teaching and learning of reading emerges during a term's topic work with a class of 10-11-year-old children in a junior school?

The specific foci within 'reading' were:

(a) Study/reference/research skills
(b) Comprehension: children's ability to interact with a text.

Subsidiary to the main question was:

> Do any previously unconsidered issues affecting reading for learning emerge?

This chapter reports on aspects of the findings under (a) and (b) above

Methodology

As a student teacher I was taught to analyze what went wrong and why in my lessons. My first headteacher taught me that it was equally important to recognize what went right and why. Thus I was introduced early to the habit of self-questioning. The people most closely concerned with the second stage of my career introduced me to many articles on research into the teaching of reading. The emphasis in these articles was to prove 'x' to be more effective than 'y'. From this I gained the impression that real research concerned the gathering of 'proof' of the measurable kind. I never questioned the need for variables to be controlled, subjects carefully matched, or the results to have statistical significance. For me, these were the elements of true research. Psychologists offered their help in setting up research projects in which I could measure the effectiveness of my methods against others. I was told that everything could be reduced to numbers and measured — even happiness. All I had to do was tell them what I wanted to measure and they would devise the test. I was very uneasy about this; often in the reports I read I saw no people or situations with which I could identify, but these seemed insufficient grounds for dismissing the content. Anning (1986) seems to have had similar feelings: '. . . I felt frustrated that teachers lacked the language to argue coherently with the researchers' (p. 54).

Learning about naturalistic research methodology released me from this tension. In particular, action research seemed to be the logical follow through to the earliest training I was given; the training which I now recognize has been most beneficial in my attempts to better the arts and crafts of my teaching. Research which helps teachers to question themselves and their practice is most likely to be of use to them in the long run. Investigations centred solely on children, where teachers appear as shadowy figures in an ill-defined background may have undesirable side effects. By focusing only on learning rather than teaching and learning, the commonsense knowledge of teachers may not be challenged:

> The point about taken-for-granted professional knowledge is precisely that it *is* taken for granted, and as such closes off certain aspects of how a teacher operates or could operate. (Cummings and Hustler, 1986, p. 47, their emphasis.)

Whitehead (1985) provided the framework to the research project which Maria and I formulated:

> I experience a problem . . .
> I imagine a solution to my problem.

> I act in the direction of the solution.
> I evaluate the outcomes of my actions.
> I modify my problems, ideas and actions in the light of my evaluations. (p. 98)

In the event it was not quite so clear cut as this. The outcomes of our actions dredged up more problems of which we were previously less aware, problems which seemed in need of more urgent solution than the first ones, and were, I believe, composed mainly of our taken-for-granted knowledge. Our reactions to the realization of this led to major changes in our approach to the children, but unfortunately we were unaware of the effects of innovation on pupils (Rudduck, 1984). I, in particular, felt that I had lost my teaching skills:

> . . . educational innovations which involve the likelihood of increased amounts of noise . . . pose particular problems in practice because their implementation potentially jeopardizes the appearance of control in the classroom. (Denscombe, 1980, p. 79)

It was not just that there was an increase of noise; that in itself would have been no problem to us. But neither Maria nor I had ever experienced such widespread minor misbehaviour and disengaged attitudes in a class before, and the cumulative effect was to undermine my confidence to the extent of almost abandoning the work at half term. Its continuance was due entirely to the very great support we were offered from my MA tutor and our colleagues in the school and the language centre from which I work.

During the major part of the action-research programme I believed that Maria and I fully understood each other professionally, and were equal partners in the venture. It was not until Maria was commenting on my data analysis that I began to realize that this was not so:

> *Maria* I didn't know what you were going for . . . I was doing a holding job . . . I wasn't involved . . . I thought you knew definitely what you were after. I didn't realize how much you were ready to change; willing to modify. Which literally meant at the end of every lesson. I didn't realize you were open to suggestion. I was the follower.

This conversation illuminated a number of worries which I had had. The principal one was that there was no carry over from what we and the children engaged in and learned during topic sessions to other areas of the curriculum; Maria did not seem to capitalize on experiences or extend them. I was puzzled by this, for I did not realize Maria's position:

> I expected you would have lesson plans and know exactly what was going to happen. I did think that if I did anything I might be interfering with your data. I thought you had to be there to monitor it all.

My own lack of clarity at the outset, coupled with what amounts to blindness in not recognizing the issue at the time, appeared to have caused the problem. When I had been practising specific research techniques I had asked Maria not to take any action in some circumstances. Further, although I knew that I was aiming to develop children's ability to read to learn I was unsure what modifications to our teaching techniques would need to be made in the light of what we were learning, and Maria did not believe me when I told her I could not predict outcomes, or felt at a loss.

I wondered if perhaps status played a part in this. I am an advisory teacher, Maria a classteacher. The promotional structure in education does not reward good teachers except by removing them more and more from the classroom. I, and many teachers I have talked with, have often felt that primary school teachers are at the very bottom of the education heap. I would suggest that a major consequence of this might be that they devalue themselves and their work. Although we discussed everything together, Maria still saw me as the leader of the partnership, even though the responsibility for the class was hers. I find it very sad that at the time she did not recognize the parts her comments played in the progress of the work:

> . . . you came back with a re-think, a new strategy if something hadn't worked out, and I just waited for you to do that . . . I didn't realize that I was contributing to the modifications.

Perhaps at the time I did not recognize this, because I did not need to, being the person in the 'superior' position. It might not matter how open the person with higher status is; if the person with less rank perceives herself to be the follower, then she most likely will be, regardless of what she has to offer. Unless this danger is recognized and brought out into the open, there might be less chance of true collaboration under these circumstances.

I feel another important factor was the growth of my overwhelming insecurity and sensitivity to criticism during the work. Was I too preoccupied with myself to consider how Maria felt? Was it that I was afraid to be seen to be failing; not in full command of the situation? At the time I was too busy trying to survive to be able to analyze my feelings; it was a salutary experience. I felt that I was under her continual, critical scrutiny, and yet the data revealed no evidence of this. I wondered whether subconscious self-preservation caused me not to record the unflattering, but no:

> . . . I should have criticized you . . . but I've never been asked to criticize before. I didn't really know where you were going or what you were after. I didn't know what I was criticizing on.

If a team is to work effectively its members must be able to give and take constructive criticism. The advisory teachers with whom I work have all learned this skill; I took it for granted when working with Maria. I feel that consideration should be given to this issue before expecting teachers to work closely together in a team. Maria and I had a fund of goodwill and personal regard to help us through; some newly-formed teams, or a part-time teacher newly entering a shared teaching role, may have neither.

Writing an account of the work carried its difficulties too. I wanted other teachers to be able to relate to our experiences. Groundwater-Smith (1983) argues a case for the 'photographic story' as a mode of presenting educational research:

> The photographic story by virtue of its immediacy, its attention to detail, its succinct expression is a powerful touch stone . . . as the readers take possession, their own revelations and insights continue to shape the meaning. (p. 14)

I could not claim that my writing is an example of the genre, but I hope that I manage to convey at least something of the atmosphere of the term, rather than present a bland record of incidents within it.

Research/Reference Skill Findings

My first impressions, gained during initial observations of children working on a specific information finding task in the library, were not only that children had few reference skills, but that also they were insufficiently motivated to persist with a task through to its conclusion. The evidence on which I based my impressions was of the following kind:

> Harpal restless, bouncing on library steps, talking . . .
> Girls giggling by card catalogue. Muhashra poking another girl repeatedly with her pencil . . .
> Arshad starts jumping down steps. Prepares to jump over bookshelves again . . .

Apparently many children could not make up their minds what subject to research. They had each been given a letter of the alphabet and told to choose a subject beginning with that letter (Torbe and Medway, 1981,

p. 79), and some children changed subjects several times. I thought that it was as a consequence of this that several children gained no information at all during their starter session, as measured by notes made by them in their jotters.

I had been told that the children had been allowed free access to the library during their previous year, and yet despite this they seemed unable to locate information quickly, going about the task in a seemingly haphazard way:

> Arshad walks slowly across to a bookshelf. Picks out a book seemingly at random . . .
> Shabida returns a book to the shelf and walks slowly around the library apparently aimlessly. She looks fed up. Takes a book from a shelf apparently at random . . .
> Roxana sits with a pile of books, looking at the covers, transferring them from one pile to another. Draws out more books from the shelves and repeats the process . . .

As a result of this type of observation, lessons were planned to teach children how to locate specific information in books quickly. Such lessons were to some degree needed, if judged by the difficulties raised by some of the children:

> The question 'What do you do if your book hasn't got an author?' came to me three times in slightly different ways. In one case there was an editor and the child did not know the term; in the second the child had not understood the phrase 'text by'; in the third the child had not realized that the name under the title was by convention that of the author.

Wray (1986) writes:

> . . . it ought to be possible for the teacher . . . (whilst children are using reference books) . . . to spot skill weaknesses and introduce activities to remedy them — activities of which children can see the point. (p. 141)

Oh, Mr. Wray! It ought to be possible, but it certainly is not easy. On the one hand, at the outset children present a multitude of problems all at the same time. On the other hand, there are the books . . . As will become apparent, I feel that the findings of Paice (1984), with regard to the perversity of books about bees, could be applied across a full range of reference books for children.

Individual difficulties were brought to the attention of the whole class examples of what they might find themselves as they worked. It was stressed that as Maria and I did not always anticipate correctly what they were going to have difficulty with, they should always bring to our attention anything they did not fully understand. By doing this, I feel that our teaching became more relevant to more children. As the term progressed and children could trust us to make positive teaching points from their errors we spent far less time teaching 'skills'; we knew that any lack of them would be brought to our attention by the child concerned. By half term children were demonstrating their reference skills by using them appropriately whenever they could.

'Whenever they could' is a key phrase. At first I had interpreted my observations in the light of the work of Lunzer and Gardner (1979) which draws attention to children who, although they can describe what to do to find information quickly, do not use these skills in practice. I began to wonder if I was beginning to uncover reasons why this might happen. There had been evidence from the start, but I had not recognized its significance. For instance, at the beginning of the initial library sessions all children in the group, regardless of their apparent abilities or subsequent behaviour, had begun work by immediately going to the card catalogue to find the Dewey number of their chosen subject. These were the 'unmotivated' who could not use reference skills. They couldn't, but it was not for want of trying.

It was only when I myself tried to use the library that I began to realize what the children were having to cope with. I could not find many of the references I wanted in the card catalogue. When I followed up a reference I had difficulty in locating the actual books, as they were frequently out of order. Having found a book which I thought might be useful I felt compelled to skim through it in addition to referring to the index, because the index was often unsatisfactory:

> Found the limitations of the library even more frustrating . . . Children couldn't find specified books . . . Children couldn't find specific information: nothing on potholes or woodworm . . .
>
> How can you teach a child to survey the literature when it consists of one book, and that without a contents page? How can you teach a child to locate information quickly when the book has no index, or the entries are wrong? How do you use an index organized in numerical order of pages rather than alphabetical order of subject? And how, oh how in the world can you find an indexed page reference in a book with no numbered pages?

It was not surprising that there was little evidence of childre[illegible]ing the contents or index pages; there were few of the former and the latter were often inaccurate, as I found myself. Gordon (1983) says that in her opinion badly indexed books daunt children and make them feel that research skills are irrelevant. My evidence strongly supports this, and I would echo her plea for the indexing of children's books to be of the 'highest standard' and not just 'farmed out to anyone willing to have a try' (p. 182).

These frustrating elements were a widespread feature of the library work. I found that even when I located a book which promised to be useful, I still had to deal with the content. I found texts simplified to the point of banality, as for example the book about windows. The first picture caption read 'This is a window', which most children would surely know; the second caption under a different type of window read 'This is a big window'. As the pictures themselves were exactly the same size, and there were no details by which to make comparisons, this could be said to be factually inaccurate. More importantly, what information is the text carrying? At the other extreme I found a book on anatomy impossible to understand, despite its attractive appearance and my 'O' level qualification.

The school library is one of the best I have come across in my work. It is organized on the Dewey system, which gives more potential to the teaching of reference skills in school. The girls of the photography topic group showed pleasure and astonishment after their spontaneous evening visit to the City Library in search of relevant books: 'Eh, Miss, did you know they have the same numbers on their books as we do?' The school library was also relatively new at that time, but the original date of publication of many books made them of limited value.

After I studied my own behaviour in the library, I looked on that of the children with new insight. What had seemed like aimless movement was perhaps simply an intelligent reaction to the realities of the situation, and the gradual breakdown of behaviour and growth of boredom a natural reaction to frustration. Take for example Harpal bouncing on the library steps, when seen in a wider context:

9.15: Harpal walks away from card catalogue muttering a number. Goes to shelves. Looks at numbers on book spines.
9.17: Harpal goes back to card catalogue, pushes in front of queue: remonstrations. Removed by children to back of queue.
9.29: Harpal sits watching others; seems uninvolved, turning pages of a book idly.
9.38: Harpal talks to others. Has a pile of books, but does not refer to them. Goes back to catalogue.
9.46: Harpal restless, bouncing on library steps. Catches my eye and returns to pile of books. Takes one and flicks through it.

9.48: Harpal making silly noises.
9.54: Overhear Harpal say, 'I don't know what to do . . .'. Pervaz seems to be giving him advice.
9.57: Overhear: 'Harpal, you've only done one line of writing . . .'.

This picture was typical of many children; perhaps I was typical of many teachers when I responded to the behaviour rather than the cause of the behaviour at first. Yet *I* went backwards and forwards from card catalogue to bookshelves, each time with less and less heart, and *I* sat on the library steps, gazing into space, wondering what to do next. Unlike Arshad, I was not agile enough to attempt a leap over the bookshelves, but I did frequently feel like kicking them.

The apparently random way in which children retrieved books from shelves seemed also to be a response to the situation as they found it. During interviews children said that when they had walked round the shelves they were looking for books with the required number which were out of place. They knew that if there was an entry in the catalogue there had to be a book somewhere. We solved this problem to some extent by starting and ending each session by checking the shelves for misfits, and relocating them. Some books simply were not there, though, or proved irrelevant. It was in response to this, the children explained, that they took piles of books and looked through them. This was not entirely at random; the children used the titles of books as a guide, which would explain why they glanced at books as they transferred them from one pile to another.

I had been surprised by the reactions of some of the children when they did find information they wanted:

Shima: I've found it! (She bounds up the library steps, waving a book).
Jameela: Phew! (She catches my eye and smiles; shows me a page with a picture of eggs on it.)
Ravinder: (jerks up suddenly from a crouched position over a book.) Gotit! Gotit! Gotit! (He looks round smiling.)

Thus there was evidence that if the material was there the children were far from unmotivated. There was also evidence of great initiative:

> Kieron shouts to Gulam, who is standing by the catalogue, 'Give me everything that begins with "w" from first to last!' Gulam reading 'w' entries to Keiron. Keiron goes up to him, exchanges talk. Keiron turns suddenly, muttering '595' and rushes to jotter. Picks it up and continues swiftly to shelf.

Doreen Gregson

My first reaction to this was that it was typical of Keiron to order other people around. But how sensible not to waste time choosing a subject before referring to the catalogue to see if there are any resources to pursue it.

The novelty of finding that research skills could work under certain circumstances was illustrated for us when I made worksheets based on available library material. The children were told that providing they followed the instructions on the sheet, I could guarantee that they would find the information. At each stage of the work the children turned to the teacher:

> I've found the book. Finished Miss!
> I've found the word in the index. Finished Miss!
> I've found the page. Finished Miss!

As the term progressed this need for step by step reassurance disappeared. At the same time specific research skills were used more often as appropriate. I find it impossible to assess how far the appearance of these skills was due to the fact that we created situations in which they could be used, or because they were being taught in the context of need.

Although the problems which children showed gradually became more likely to be child- or teacher-centred ones, and less likely to be due to inadequate situations, we were still able to misjudge what was happening:

> Children have each been given a pile of new books and asked which Dewey number they think best for each book. Maria comes up and whispers, 'That idiot there has two books on rabbits and has given them different Dewey numbers'. Investigation shows child is right; one is a book on pet, and one a book on wild rabbits.

Specific problems were never common to the whole group, but frequently seemed to be caused by difficulty in relating to written instructions:

> Salamat and Jameela come to me, a book open at the index.
> *Salamat:* It isn't in, Miss. Gully isn't in the index. (I look. It isn't, but it was when I wrote the worksheet. Realize that the entries don't conform to what I would have expected for the subject matter on the sheet. Turn to the front cover; title is 'Days of the Week'.)
> *Me:* What is this book called?
> *Salamat:* 'Days of the Week'.
> *Me:* What is the title of the book on your sheet?
> *Salamat:* Ellis.
> *Me:* No, that's the author. Do you remember, author first, then . . .

Jameela: (interrupts) Date.
Me: Good . . .
Jameela: (continues from before as if I had not interrupted) Oh! 'Pipes and Wires'!
Me: Yes, that's the title . . . Well? (Pause, children look expectantly at me.) The book you need is called 'Pipes and Wires'. The book you've got is called 'Days of the Week' . . .
Salamat: (lively) Oh! I see! It's got to be *that* book! Oh! Now I know! She grabs Jameela and rushes off leaving me holding 'Days of the Week'.

During earlier work I had noticed a problem with children taking a book seemingly at random when the instruction called for a specific one. I wonder whether it relates to inexperience of having to follow written instructions without verbal ones being given in addition. Frequently teachers talk through written instructions, which makes it unnecessary for children to work out any interpretation for themselves. In this instance the oral instruction was 'follow the instruction on your sheet'. I was pleased to note that many children, who were all working in pairs in this lesson, did discuss together what the instructions implied before they attempted to follow them. We praised all signs of initiative. As might be expected, some children needed more support than others to gain enough confidence to trust their own judgments, but as a tactic it seemed to work well. As more children asked fewer questions, it meant that we had extra time to devote to those children who had problems concerned with the work itself.

Looking back over the issue of the teaching of research skills, I wonder whether instead of asking myself 'What study skills do the children have?' I should have asked 'What factors interfere with children's ability to put study skills into practice?'

Comprehension of and Interaction with Text

It has been impossible to write this section without free use of value laden and ill-defined terminology such as 'less able'. This is because at the beginning of the research Maria and I used these terms in just such a way; they were the 'commonsense understandings' of 'truth' and 'reality' which had to be 'cut through' (Bogdan and Taylor, 1975, p. 11). I hope, as the chapter progresses, to illustrate how I began to question the use of such terminology, gradually finding it inappropriate or irrelevant

A major concern at the outset was that children should not be faced with texts they could not read. I intended to produce special worksheets for the less able, but from the first attempt I began to question the value of this. The worksheet concerned had two parts, the first of which was for children thought to have basic literacy problems, and the second for the rest of the class. None of the children doing part (a) had any difficulty; by contrast, the children working on part (b) had many problems which seemed mainly to be caused by an inability to put themselves in the position of someone else. After watching the 'less able', who had quickly finished their own work, begin helping the 'more able' and 'average' children I felt less committed to the making of special worksheets. My experiences during the personal topic periods reinforced this feeling. To illustrate this, I have taken the example of two strongly contrasting children, Muhashra who had chosen to study clothes, and Amina who had chosen photography.

Muhashra, considered the least able child in the class because of her language and literacy difficulties, enjoyed looking at books on clothes, aimed at the adult market. She frequently initiated comments on these, which made me aware that she was not just getting information from pictures. It has become something of a cliché to say that 'motivated' children can read texts far in advance of their 'reading ability'. Logically this cannot be so; what the children are demonstrating is that their ability has been underassessed. In this case I felt that it was her hesitant and strongly accented English which misguided us. During observation of a personal topic lesson I noted that Muhashra attempted to initiate conversation with the remedial teacher who was working with her group. The teacher, new to the situation, responded by taking the book Muhashra was looking at, and reading aloud from it, asking her if she understood. The teacher explained that she had done this to try to simplify a task which she thought too difficult for the child. During the reading, however, Muhashra exchanged glances with another girl several times, seemingly totally disengaged, as she waited for the teacher to finish and give her the book back. She then continued looking through the book, but only addressed comments on it to other children after that.

During this period the photography group was also in the room, being tutored by Maria. These girls often initiated social conversation which I found very enjoyable; they also showed great insights into their own personal problems. Because of this, and the fact that they had no overt difficulties with reading and writing, I thought of them as being able. Amina was a member of this group, and the following is an observation of her during the session:

1.37 Lesson begins. There is a pile of books on the table which the children are reading for background information. Maria spends time cajoling each member of the group in turn, trying to get them to say which aspects of photography they would like to follow up.

2.13 ***Amina:*** 'There's nowt in these books'. She pushes two books away from her as she leans on her elbow on the desk. She looks bored.

Maria: 'There's one, two, three, four, five, six black lines there. Surely they have ***something*** on them!'

2.14: Unexpected visitors enter, unescorted. They explain to Maria that they have come 'to see multicultural education'. They look round the room without moving and begin asking her questions.

2.15: Amina talks to Kate about playtime. Begins rocking backwards and forwards, beating a rhythm on the table top.

2.16: Kate joins in. Rebecca stage whispers 'Sshh!' They all giggle and general chat develops. They begin sliding books across the table to one another.

2.26: Still chatting, resting heads on hands, lounging over table.

2.29: Visitors leave. Maria returns to group.

The issue of motivation emerges here, but at the time, we simply questioned why Amina and others like her, who had no obvious learning problems, did less well at a reading task than Muhashra, who had several. Which child was the less able in this situation, and what would either of them have gained or lost by using tailored work sheets rather than books? At this time too we had not recognized subtle complications surrounding the issue of free choice, and therefore expected that, having chosen their own topic, children would be motivated to read.

The term 'less able' became obsolete as we began to qualify it so often: less able to do what? Through this qualification informal but thorough diagnosis began to develop for each child. Attempts to group children according to 'ability' were abandoned as we realized that there was no way of telling what any child's ability at a given task was going to be until the task got under way.

The main plan for the personal topic lessons was as follows:

(a) The children were formed into groups of six, and told to decide on a topic within the theme 'holes'. There was considerable freedom, not only of choice of subject, but also of organization, as they could all work together or split into sub groups as they wished.

(b) When the choice had been made, groups were asked to collect material from the library for background reading.

(c) They were asked to note down any questions or reflections which occurred to them as they read.

(d) Finally a plan of action was drawn up specifying what form their work would take; how they would get required information (other than books),what visits they would need to make, and so on.

Our most fundamental problem occurred immediately. Regardless of their apparent ability the children would not read. They did not seem to recognize reading as 'work' and we were frequently asked, 'What do we have to do?'. When the instruction 'Read about your subject' was repeated children countered with 'Yes, but what do we have to *do*?'. Some of the 'able' attempted to help us out with suggestions: 'Shall we make notes about it?' 'Have we to write about it?'. Again and again we explained the purpose of background reading, dropping all reference to the questions. As this seemed so totally alien we thought it might be the cause of the problem. All the children had difficulties at this point, but it was the 'able' who were the hardest to help over the hurdle:

> *Maria:* (during discussion of our work with a third person) The middle range . . . they got on and did things . . . They were the ones who worked their way through the whole lot and actually got on very well . . . (The top range) were resentful when we stopped them copying out . . .

A possible reason for the 'middle range' to have managed more successfully was that they had had less experience of using the library unsupervised to develop their own topics. Thus they had not developed a pattern of working which had to be dismantled before another could be introduced.

We have no direct evidence as to the previous educational history of the class, but it would seem that during their time in school reading in itself had not acquired any status as an activity. Until we could persuade children to read we could not tell what problems they had. When the problems did begin to appear they varied tremendously in nature. The most easily discernable was the 'reading' of words outside the child's spoken vocabulary, where either the verbal or other contexts gave little clue to the word's meaning:

> Children have been asked to guess the content of a book from the front cover only. Sameena has a book called 'Man the Healer'. Picture on front cover is of an eighteenth-century surgeon operating. Sameena thinks the book is 'about killing'. Does not understand the word 'Healer' though she can 'read' it. Picture on cover is sole clue, and certainly looks gruesome.

BEST COPY AVAILABLE

In this case an explanation of the word sufficed. In the following example the text the child was using had been so simplified as to be misleading, and therefore although the child could read and understand, his lack of background knowledge led to mistaken assumptions.

> Aslam comes up with a book open at a picture of a pirate with a 'peg leg' and says: 'Why does pirates have to cut their legs off and put these on?'. The caption to the picture does not make clear that wooden legs are incidental rather than desirable.

This example was dealt with by filling in the missing detail orally. The child was quite able to relate to the new knowledge.

Greater difficulties arose when children were not so easily able to assimilate the information:

> Hafiz has misunderstood 'self rescuer', reading 'a self rescuer belt' rather than 'a self rescuer on his belt'. He cannot understand what I am getting at and perseveres in thinking that a self rescuer is a belt, despite all my explanations and references to the picture and text.

I spent over half an hour with Hafiz, discussing his problems. My fieldnotes record that two days later I 'checked Hafiz to see if he has grasped the idea. He has'. I was wrong. His finished work reflected the error rather than the teaching.

The inability to grasp an idea might be due to the wide perceptual-language distance (Blank, Rose and Berlin, 1978) and the difficulty of the teacher in helping the child to bridge it. In this case the child did not seem to be able to relate to the picture, and I had neither a concrete example nor a useful analogy to which he could relate more easily. In retrospect I felt that the explanations were merely circling around the problem instead of closing in on it; they were all at the same perceptual-language distance. With later, similar problems, I asked the child 'to leave it with me' in order to give myself time to think out a way of reducing the task to a point with which the child could relate, and then re-building it to the point of original misunderstanding. Children's interest did not seem adversely affected by the delay.

During the term we found more evidence of passive reading (Browne, 1985, Lunzer, Gardner, Davies and Greene, 1984). Some children did not expect to have to do more than decode a text, after which all 'reading' was finished.

> ...(the children studying the eye) wanted to do how the ey works. What they didn't realize was that the book was usin

> optical illusions to demonstrate how the eye works . . . I (Maria) sat down with them and discussed each paragraph as they read it. Usually it told them to do something and I made them do it. They got interested then and involved, and began understanding.

As the problem had been noted with previous classes we had introduced a weekly reading activity similar to that envisaged by Southgate, Arnold and Johnson (1981): . . . 'it seems advisable to concoct goals where the outcomes involve either, *doing* something or giving an oral response, (not oral reading)' . . . (p. 291). Usually we took a short extract from the book currently being read to the class, photocopied it and asked them to:

(a) underline details which could be included in an illustration; and
(b) produce the illustration using the underlinings as quick references.

The aim was to see how accurate a mental picture the children were forming as they listened, and the activity was developed into one of converting information from one form to another (for example, drawing a map from information in a text). This not only uncovered children's misconceptions, it also acted as a check on the clarity of our didactics; for example in the lesson in which I was involved no-one knew the word 'niche' and the subsequent drawings gave us a measure of how effective our explanations had been.

In an attempt to extend the use of this technique further I gave the girls of the photography group the instruction booklet which came with the equipment for developing films, and asked them to extract in list form:

(a) the required chemicals and quantities, so that when we went shopping we knew exactly what we needed to buy, and
(b) the sequence of steps to be followed, written out clearly so that we could read them in semi-darkness. I also thought that this part of the exercise would give the group, and me, some idea of what to expect in the practical sessions as none of us had any experience of developing and printing photographs.

The instructions in the booklet were written in several languages; I photocopied the page which had the English version, and incidentally, the French version too. What I expected the children to produce was a simple shopping list, followed by a simple list of step-by-step instructions which we could follow more easily than the rather verbose and minisculely printed original. I felt the exercise valuable in that it reflected a reading experience that they would be likely to encounter many times in different contexts in real life.

Despite many attempts at explanation and demonstration, the result was a complete fiasco, as the girls seemed merely to have underlined words at random all over the sheet. The following extracts are from a taped discussion held with the group nearly two months after the event:

Me: Did the fact that you had to read real instructions . . . help you at all?
All: (subdued) Yeh . . . yes.
Me: Did you feel you actually understood what you were reading?
Amina: Not all the time, no.
Me: Where did you fall down?
Amina: Big words. Long words.
Robeena: . . . those sheets you photocopied for us (the instructions) were too small. We couldn't read 'em. Nearly all the words were complicated . . .
Amina: When we were doing it we underlined the French words too.

The underlining of the French words caused a major row at the time, as I interpreted it as yet another example of the group's unwillingness to work sensibly, and illustrates how a teacher's preconceptions may totally blind her to the reality of the situation. In this case the blindness was perhaps a reaction to previous difficulties in motivating the group and their propensity to indulge in mild disruptiveness. At the same time I saw a group of girls who I thought were capable of far more than they gave, complaining of having to do 'boring reading' and reverting to silly behaviour. But was I in fact placing these 'able' girls in a situation where they were unable to demonstrate the abilities they had? I did not analyze closely what I meant by able, but I have since begun to do so.

I am a very able reader of detective fiction. I can decode every word and follow the story line effortlessly. I am able to read textbooks on reading; my background knowledge enables me to reflect on what I have read. When I began to learn about qualititive research methodology I was a less able reader of the relevant texts; it took several weeks to link what I thought were the 'paradimes' of my tutor with the paradigms of the books. I am a virtually illiterate reader of books on nuclear physics; not only do I fail to recognize words on sight but I also have insufficient background knowledge to help me to use context or to relate to what I read. Does all this make me a more or less able reader? One has to ask the question, 'More or less able to read what?'.

The photography group had shown themselves able to read books on photography. In my efforts to 'stretch' them, in effect give them a task at which they were less able readers, I rendered them 'virtually illiterate'

When I asked, in the same interview as quoted above, long after the heat had died, why they had underlined the French words Robeena replied, 'Because the other words were so complicated . . . and we knew they were English . . . but when we came to the other (French) words we just thought, "Oh, this is even more harder", and we carried on'. Tabberer (*1987*) says '. . . education is about putting students in a position where they will encounter many problems — and work towards their solution' (p. 193). Perhaps the mark of a good teacher is that she recognizes the degree of difficulty each child requires in order to be stimulated but not overwhelmed.

Recognition is a crucial skill. I asked the children why they had not felt able to tell us at the time that they did not understand the work. Amina replied, 'Sometimes you got mad at us because you told us twenty times and we kept forgetting'. What they had been asking for was the decoding of a single word each time, and I did not recognize quickly enough that the giving of these was not helping to build an understanding of the whole. This was partly due to the fact that there were two teachers involved; as each of us was approached in turn we only saw half the magnitude of the problem. Furthermore, both Maria and I were embroiled in a situation of constant minor misbehaviour in the classroom; once again we appear to have reacted to the behaviour rather than to the causes of it. If we learned only one thing from this experience, it was that theoretical knowledge of comprehension problems is not enough; one needs to be able to recognize all the manifestations of the problems in practice.

Conclusions

With regard to the teaching of research skills, Maria and I realized how important it was for the teacher to put herself in the place of the child, and try the work, as this uncovers hidden situational problems (Hill, 1980). The most important skill of all, we felt, was one which at first we not only did not teach, but positively tried to eliminate: the skill of coping with frustration when trying to find information. We no longer 'doctor' work in order to ensure success; we teach children strategies for coping with sometimes inevitable failure to find relevant resource material.

The issues arising from studying the children's comprehension were complex, and have led to a continuation of the research. The immediate result was the introduction of a deliberate policy for raising the status of reading in the classroom. Of equal importance was the development of strategies by which the classteacher could buy time to talk at length with grou[illegible]f children about their work and its problems.

For me, the most important insight has been in finding how often I responded to symptoms rather than to causes. Furthermore, even when I recognized my assumptions in one context, I was very slow to transfer that knowledge into others. Time and workload are very important factors in this. During the practical work the sheer stress of day to day teaching and evening-to-evening preparation made it difficult to relax sufficiently, to be able to stand back and reflect on events. Stenhouse (1975) seems to recognize the realities of classroom life: "The conditions of teaching ... often make survival a more urgent concern than scholarship' (p. 92). Yet the 'scholarship' or 'reflection' might possibly make survival easier, and eventually render the word obsolete. During the spring term, Maria and I experienced some very rewarding lessons fashioned from our insights, but we acknowledge that we were unlikely to have reached this point had we not been given a great deal of support from colleagues. This ranged from pointing us in the direction of reassuring research which indicated that perhaps the problems we were experiencing were not simply due to us losing our grip, through to pressing cups of coffee into our hands as we staggered, sometimes close to tears, from the classroom.

The most important factor in developing professional classroom skills would seem to be one of creating conditions in which it is possible for a teacher to break out of the 'survival' cycle. At the outset of this work, as a convert to action research, I felt that all teachers should experience it as part of their in-service training. Now, having more than theoretical knowledge, I am not so sure. Unless the conditions are right, with wise counselling and time made available for teachers to stand back from their problems, action research may break a teacher completely as she exposes in more and more depth her taken-for-granted knowledge. This is not to argue against classroom based action research, but a plea for conditions to be developed in which it can thrive.

References

ANNING, A. (1986) 'Curriculum in action', in HUSTLER, D., CASSIDY, T. and CUFF, E. (Eds) *Action Research in Classrooms and Schools*, London, Allen and Unwin.

BLANK, M., ROSE, S. A. and BERLIN, L. J. (1978) *The Language of Learning*, Orlando, Grune and Stratton.

BOGDAN, R. and TAYLOR, S. J. (1975) *Introduction to Qualitative Research Methods*, London, John Wiley and Sons.

BROWNE, A. (1985) 'Young children's attention to textual context', *Reading*, 19 (
pp 46-50.

Cummings, C. and Hustler, D. (1986) 'Teachers' professional knowledge', in Hustler, D., Cassidy, T. and Cuff, T. (Eds.) *Action Research in Classrooms and Schools*, London, Allen and Unwin.

Denscombe, M. (1980) '"Keeping 'em quiet": The significance of noise for the practical activity of teaching', in Woods, P. (Ed.) *Teacher Strategies: Explorations in the Sociology of the School*, London, Croom Helm.

Gordon, C. (1983) 'Teaching the young to use indexes', *The Indexer*, 13 (3) pp. 181–2.

Gregson, D. (1987) 'Why do Pirates Have Peg Legs? A Study of Reading for Information', Unpublished thesis submitted for the Master of Arts degree, York University.

Groundwater-Smith, S. (1983) 'The Portrayal of Experienced Education and the Literature of Fact'. Unpublished paper presented to CARE Study Group, University of East Anglia, March 1983.

Hill, M. (1980) 'The teacher's craft and "basic skills" ', in Richards, C. (Ed.) *Primary Education: Issues for the Eighties*, London, A. and C. Black.

Lunzer, E. and Gardner, K. (Eds.) (1979) *The Effective Use of Reading*, London, Heinemann Educational Books.

Lunzer, E., Gardner, K., Davies, F. and Greene, T. (1984) *Learning From the Written Word*, Edinburgh, Oliver and Boyd.

Paice, S. (1984) 'Reading to Learn', *English in Education*, 18 (1) pp. 3–8.

Rudduck, J. (1984) 'Introducing innovation to pupils,' in Hopkins, D. and Wideen, M. (Eds.) *Alternative Perspectives on School Improvement*, Lewes, Falmer Press.

Southgate, V., Arnold, H., and Johnson, S. (1981) *Extending Beginning Reading*, London, Heinemann Educational Books for the Schools Council.

Stenhouse, L. (1975) *An Introduction to Curriculum Research and Development*, London, Heinemann Educational Books.

Tabberer, R. (1987) *Study and Information Skills in Schools*, British Library R and D Report 5870. Windsor, NFER-Nelson.

Torbe, M. and Medway, P. (1981) *The Climate for Learning*, London, Ward Lock Educational.

Whitehead, J. (1985) 'An analysis of an individual's educational development: The basis for personally oriented action research', in Shipman, M. (Ed.) *Educational Research: Principles, Policies and Practices*, Lewes, Falmer Press.

Wray, D. (1986) 'Information skills through project work', in Cashdan, A. (Ed.) *Literacy: Teaching and Learning Language Skills*, Oxford, Blackwell.

Reprinted with permission from Language Arts, Volume 65,

Writing Reflectively

Betsy Sanford

"It's time to line up for P.E.," I announce to my fourth graders.

It's a Tuesday morning in late April, and we have just finished math. Some students are busy doing the final problem on a long-division assignment I have given; others are returning from another teacher's class. The students hurriedly put their books and papers away and get in line. I move to the front of the line, just as prompt about getting them to the gym as they are about going.

I'm in a little bit of a hurry today. I remind myself that I have some important errands to take care of—photocopying that I will need for later in the day, a telephone call that I really must make—but instead of going to the office I find myself heading back to my classroom. I'll take just a few minutes, I tell myself, and then I'll get to work on the "To Do" list.

The rush this morning, like many other mornings this year, is because I have a stack of papers on my desk that I want to read. They are the papers from a piece of reflective writing my students did yesterday. I know from past experience that among those papers there will almost certainly be a few that will surprise and perhaps even elate me.

This time, students have written about how the reflective writing they do affects their learning. I use the term "reflective writing" for times students write to make sense of and give shape to what they have learned (or what they have learned about *how* they learn). It includes responses to students' personal reading and responses to the work they've done or the material they've encountered in science, social studies, and math. From time to time, I also ask students to write more generally about their writing, their reading, or their learning.

The question I asked this time was a hard one, and as we talked yesterday before starting to write, students were persistent in asking what I wanted. I tried to explain. I was wondering, I said, about what happens when students write about what they are noticing, what they have learned, what connections they are making. We'd been doing this kind of writing for most of the year in all subject areas, I reminded them, and I wanted to know how they saw the process of writing reflectively. I continued trying to explain, and gradually my students' questions subsided. I noticed more than the usual bustle as they settled down to write (usually a sign that the writing will be difficult), but in a while most were busily poring over their papers.

What Students Say

Now I finally have a few minutes to read through what my students wrote, and I sit down with my coffee, ready. I start with Matthew's paper (I've edited all student papers for mechanical errors):

> When I am writing a log entry, what happens is I feel like writing a report but that is not what I am supposed to do. I feel like I do not know what to write, but after a while I know what to write.
>
> I always feel nervous about if I am going to get anything down on paper or if I am going to get a good grade.

It's a telling entry for Matthew in many ways. Throughout the year, he has struggled with moving past retelling and toward responding in his reading responses. His anxiety shows through in his concern about what he is "supposed to do" and his apprehension about his grade (almost without exception, log entries are ungraded, although I do write responses to them). Still, there is something here that I'm pleased about: Matthew has noticed that "after a while I know what to write." He's beginning to notice and trust his responses, I think to myself.

I read a few more entries and confirm for myself that this was a hard topic to write about. I glance through the papers and see that several students have written about their personal writing. Others have written around the subject, not quite touching on what happens to them as they write reflectively. Caitlin's is one of these:

> Dear Mrs. Sanford,
>
> When I write reflectively, I begin to realize how much I need to improve.
>
> It also makes me think about how much I've improved during the school year.
>
> When I look through my old log, it looks like third grade work, and I see how much I've improved. Then I see how much I need to improve and my work gets better and better.
>
> Your friend,
> Caitlin

I continue reading, partly distracted by thoughts about how I could have made the assignment clearer. I wonder to myself whether I have asked my students to take too big a step back from their work by asking them to reflect about reflection. Then I turn to Lynne's response:

> Dear Mrs Sanford,
>
> I see that as I write log entries I tend to read them. I find in some places where words are misspelled or where I got an answer to a question or I something [sic].
>
> Last year my teacher gave us so much homework I would just memorize it and not care what it was or if I understood it and you take a test and have nothing to show for it. Except for the grade but it doesn't matter the grade. Understanding is what counts for you.
>
> These log entries help me a lot.
>
> As I write I notice and *understand* more too.
>
> Your student,
> Lynne

As I read, I feel my eyes begin to tear up. Lynne, who according to her mother "lives for school," is one of the ablest students in the class, as well as one of the calmest and happiest, it seems to me. I am caught off guard by the intensity of her feelings. My heart goes out to this ten year old who has already learned the hard way that paperwork doesn't guarantee understanding, and that "understanding is what counts for you." At the same time, I am particularly struck that she is articulating the same concerns which drew me toward reflective writing in the first place. In fact, Lynne has hit the nail on the head for me; she has demonstrated, in a nutshell, why I ask students to write reflectively.

My Reflections on Reflective Writing

At the heart of reflective writing lies the idea of "critical consciousness," I believe. The term is associated with the work of Paulo Freire. Like many others, Freire feels (and I agree with him) that knowledge is generated when one engages with the world by thinking and reflecting about it. Knowledge cannot be given, it must be constructed, and understanding is an internal process of creating knowledge through the ways one thinks about the world. Referring to his work with Brazilian peasants, Freire explained the implications his view of knowledge has for teaching:

> Thus the educator's role is fundamentally to enter into dialogue with the illiterate about concrete situations and simply to offer him the instruments with which he can teach himself to read and write. This teaching cannot be done from the top down, but only from the inside out, by the illiterate himself, with the collaboration of the educator. (1978, p. 48)

When Lynne wrote her log entry, she was pointing to the same idea. "You take a test and have nothing to show for it," she said, knowing that giving back someone else's right answer doesn't insure that learning has occurred "from the inside out."

When my students reflect in their writing, they are paying attention to their own ways of making meaning. When Tara writes (in a social studies learning log entry about Virginia life in the 1800s), "Yesterday my class talked about women being housewives. It's not fair, I thought. They should have ganged up on men to show women are as good as men," she is engaging with the material on her own terms. She is developing her own ideas about her culture as she looks critically at one removed in time. Even when she is influenced by those around her (as she probably was by me in this case), she is extending her awareness of the values embedded within facts.

I use reflective writing as a way to enable my students to "demythologize reality" (thanks again to Freire for the phrase). When students write in terms of their own reactions and responses, they are learning that their ideas are as potentially powerful as any other expert's. If students write responses instead of answering comprehension questions following a selection, they are making their own meaning rather than relying on another reader's interpretation of the text at hand. To paraphrase what Shaena said recently, "It's easier to answer someone else's comprehension questions. When you write a response to what you read, you have to think for yourself what's important." Beyond Shaena's recognition of the difficulty of engagement, she sees that her own responses are as valid as those of the questioner; she knows that she *can* identify what's important. Shaena is recognizing that there is no "knower of text" who determines how she must shape her own knowing.

When I ask students to write reflectively, I usually write a response to their writing. I try each time to acknowledge what seems significant to me in the response, and sometimes I respond by asking a question. When Andy recounts his midbook reading of a Hardy Boys adventure and says he wonders what will happen next, I ask him what he thinks will happen next. When Vondra notes, "I wonder why Gretel always cries in this book," I ask her why she thinks the author made Gretel cry so much. My responses begin wherever I can find a way to help students look at the links they are forging. To ask a question, to note a connection I've seen in the writing, to agree or disagree with a hunch and give my own reasons: these are the ways I use the responses I write back to my students.

I made my own connection about my responses to students when I encountered the work of Lev Vygotsky. Vygotsky writes about the "zone of proximal development," explaining it this way:

> It is the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers. (1978, p. 86)

When I read the reflective writing of students, I note what they have accomplished independently, but my real interest lies in what they may be able to piece together with help from me. My goal is to figure out (and then provide) the right stimulus for students to make the next step in reasoning, to synthesize, or to make a connection on their own. I'm aiming for that area between what students can do independently and what they can do with assistance.

I'm often aware that my position as an audience for my students' reflective writing is a dual one. On the one hand, I urge students to consider me an audience. I want them to feel that they're talking to me, discussing with me the ideas that are occurring to them, examining with me the meaning they are making as they learn. On the other hand, though, I encourage students to write for themselves and from their own needs—to write to clarify and to question—and because of that I try to minimize my role as audience, to put my role into the distance. In some respects, the roles are conflicting—I'm an audience, but one who can be discounted.

I believe that this dual role—of being both audience and overhearer—is connected to the shift learners make from interpersonal to intrapersonal language as they internalize learning. By being an audience for my students as they write reflectively, I provide a setting for the development of interpersonal language. At the same time, I want to help students shift to viewing *themselves* as the audience for their reflective writing. With this shift, they create interior dialogue and move toward internalizing what they have learned. As Vygotsky says, ". . . Internal speech and reflective thought arise from the interactions between the child and persons in her environment" (1978, p. 90).

I've come to realize that beyond my concern about engagement and exchange between the learner and the world, there is another reason I feel drawn toward reflective writing. In the personal writing my students do, they determine the genres and topics for their writing. After all, writing is a "complex cultural activity" (Vygotsky 1978). It is embedded within culture, imbued with meaning by its culture. If student writing is to represent a negotiation of meaning between writer and reader in a cultural context, it has to be relevant to the student's life, something that originates with the student.

This lack of relevance is something I'm often aware of as I consider content area assignments, where students have little control over their writing. In some respects, reflective writing represents a compromise between the autonomy of student-structured learning and the dependency represented in a set curriculum. While the reflective writing my students do is assigned, they are writing to give shape to what they know, writing to examine and explore their thoughts. Students have the opportunity to write with meaning and relevance for themselves when they write reflectively.

I've found that there is a place in reflective writing for discussion and exchange among students, too. I've noticed that often at least two or three students ask to share their writing with the class. At first I was surprised to find them eager to share writing that could be so risky; now I know to expect it. I've been pleased by the comments students make to the writing they have just heard, too. Often they say that their response is similar. Sometimes a second student elaborates on what the first has said; sometimes there are murmurs of disagreement about a point of view presented. As students evaluate another's response, they are thinking through their own.

My students like to talk to each other as they work on reflective writing assignments. Stacey, halfway through a paper, is likely to look up at Susanna and, with a twinkle of satisfaction in her eye, read what she has written. Just as often, Susanna will comment, "Oh, that's good," "I don't get it," or "How does that connect to the rest of the book?" (a question Susanna is known for pursuing). Most other students are doing the same kind of sharing to one degree or another, too. Writing reflectively is a group experience, a kind of collaboration.

Probably the biggest reason I ask students to write reflectively has to do with the idea of "nonmagical thinking" that Janet Emig talks about. As Emig (1983) points out, to think magically is to "believe that students learn *because* teachers teach and only what teachers explicitly teach" (135). To think nonmagically is to accept that students learn developmentally, that they learn what they can learn and what they are ready to learn. This year I watched with fascination as my students used reflective writing to extend and expand their ideas, and I started to rethink my role as a teacher.

BEST CO

In my teaching career, I have spent uncounted hours in front of groups of students explaining ideas, presenting concepts, hammering away at the things students need to know. It was hard work, but my students made progress and I felt my efforts were worthwhile. This year I reduced the time for "teacher to student" direct instruction in order to clear time for reflective writing. I hoped that with less time for direct instruction I could still cover the same material, but at first I worried that I might be shortchanging my students. Then, as I read my students' writing, I saw the breadth and depth of their thinking. In sharing and discussing their work, they are being exposed to far more thinking than they would be if I were teaching at the front of the room. Again and again, their writing has made me aware that there are many possibilities to learn when we reach beyond the one-dimensionally right answer to a test or comprehension question.

Earlier I said that Lynne was able to show, in a nutshell, why I ask students to write reflectively. The past few months, I've tried to examine more closely the pieces within that shell. I've realized that there are many interwoven reasons that I've chosen to teach as I do. Writing reflectively, students begin to internalize what they learn, to take action as learners, and to develop their ability to think. They seize opportunities to engage with the world, to participate in their culture, and to make meaning. Education, as Freire rightly noted, can be used to free people or to domesticate them; when students write reflectively, I think they are being liberated, not dominated. And in my teaching, I can't hope for more or ask for less.

References

Emig, Janet. "Non-Magical Thinking: Presenting Writing Developmentally in Schools." In Janet Emig *The Web of Meaning: Essays on Writing, Teaching, Learning and Thinking*. Upper Montclair, NJ: Boynton/Cook, 1983.

Freire, P. *Education: The Practice of Freedom*. London: Writers and Readers Publishing Cooperative, 1973.

Vygotsky, L. S. *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press, 1978.

Betsy Sanford teaches at Forest Edge Elementary School in Reston, Virginia.

PY AVAILABLE

Reprinted with permission from Theory Into Practice, Summer 1990, 29(3) (theme issue on "Teacher as Researcher"), Copyright 1990, College of Education, The Ohio State University.

Mary Dicker

Using Action Research to Navigate an Unfamiliar Teaching Assignment

It was the last week of June, just before the summer holidays, that I learned about the change in my teaching assignment for the following year. I was teaching five mathematics courses and two drama courses in a secondary school in Burns Lake, British Columbia. Proud of my achievement in both of these areas, I assumed that this situation would continue the following year. A casual check of the next year's timetable in the principal's office, however, stopped me in my tracks. My 11th-grade drama course (Acting 11), had been cut from the schedule and in its place I had been assigned an 11th-grade English course, Communications 11. I was both angry and apprehensive—angry that my hard won victory establishing drama in our school program was so short lived and apprehensive that the course I was being assigned was in an area in which I had no professional expertise or experience.

Communications 11 was a new course developed by the ministry of education to replace an 11th-grade English course called Minimum Essentials, a course intended for students with weak English skills. The new course, aimed at the same audience, was to be implemented for the first time the following year. I was given the assignment despite the fact that I had no formal training or expertise in the teaching of English.

My anxiety increased when I learned that the only materials available from the ministry prior to September were a thin curriculum guide summarizing the learning outcomes expected in reading, writing, listening, and speaking and two writing textbooks, one of which was a reference communications handbook. It was expected that teachers would rely largely on their own knowledge of and training in the subject. The difficulties of my situation were compounded by the fact that there were not enough textbooks for each student in the class. I expressed my feelings on the matter to the administration and was assured that, although I was not qualified to teach English as such, my general professional skills combined with a knowledge base in drama would enable me to teach the new course.

Many teachers have been placed in similar predicaments, being faced with new courses outside their teaching area and limited resource materials with which to teach them. How do teachers cope in such a situation? How do they utilize their own knowledge and organize their teaching so that the learning situation becomes a viable one for their students in spite of the circumstances? Assuming the role of teacher researcher, I decided to undertake an action research project to answer these questions.

Action research is a form of self-reflective inquiry that can be utilized by teachers in order to improve the rationality and justice of (a) their own practices, (b) their understanding of these practices, and (c) the situations in which these practices are carried out (Carr & Kemmis, 1983, p. 152). It seemed an appropriate choice of inquiry for my situation. Therefore, applying the four components of the action research cycle, planning, acting, monitoring, and reflecting (Kemmis & McTaggart, 1982, p. 7),

---

Mary Dicker is a secondary school teacher in Burns Lake, British Columbia, Canada.

Theory Into Practice, Volume XXIX, Number 3, Summer 1990

I examined the knowledge I used in teaching Communications 11 and how I used this knowledge.[1]

Examining My Knowledge

The examination of my knowledge base took place over approximately 3 months from the first day of classes in September to the beginning of December. Following the recommendations of Kemmis and McTaggart (1982), the major data collection device was my own reflective journal or diary, written each evening following a class period. The journal had two purposes: to shed a focused light on the previous lesson and to clarify plans for the following lesson. It was in fact a record of my thinking, revealing my practical knowledge and the particular way it was held and used. A further reflection was written each weekend in order to extend and deepen the reflections on the week's work and to develop a sufficiently thick description for the study.

As a second source of data, students wrote journals during the last 10 minutes of each class or for homework. Not only did this deepen the students' thinking about their work but it provided me with a different perspective on the events that were happening in the class. Anticipating that students might need some assistance in writing the journal, I posed several questions for them to answer.[2] Using the daily journal as a basis, the students wrote a longer reflection for homework every 2 weeks. Again they were asked to respond to specific questions.[3]

The students' journal writing was not only educationally valid as an assignment that encouraged writing skills as they reflected on their experiences in the class and organized their thoughts, but it also provided a basis for my future planning. The knowledge gained from my reading and reflection on the student journals became an integral part of my own journal as I commented on student writings.

A third source of data for the study of my practical knowledge use was a former teacher of English who took the role of "critical friend." In this role she read my journal and asked questions that helped me reveal the thinking that was not always fully expressed in the journal. This critical friend was an important part of the study. As I developed insights during the progress of the study, the validity of these interpretations were checked by this independent critic.

A final monitoring technique was the tape recording of the first and final lessons of the period under study and occasional other discussions, brainstorming lessons, and oral work. Not only did the tapes capture the "teacher-in-action" but like the student journals, they also provided a student perspective. The tape recordings were a valuable check on the accuracy of my interpretations as I analyzed my journal.[4]

My Teaching Styles

The journal analysis and other monitoring devices made it clear that I had used two major teaching styles while teaching the course. As teachers gain experience in the art of teaching they inevitably develop a style reflecting a basic philosophy about how a particular subject should be taught. My two different teaching styles reflect my philosophy in each of my teaching areas, mathematics and drama. I regard mathematics as a formal and logical subject that requires a formal, ordered approach. Although students can work together to achieve understanding, the test of student mastery is their ability to solve problems individually. In my view, the British Columbia mathematics curriculum is process oriented,[5] with a correct answer for each problem. The underlying question is, "Which process has to be used in order to get the correct result?" Even if one can take several routes to solve the problem, the student is still looking for the "right" answer.

In order to achieve individual mastery of mathematical processes, I use a traditional, teacher-directed approach. I follow the curriculum by adhering to the textbook and supplementing this with worksheets. The students sit in rows facing the chalkboard. I explain, the students learn, and I check their understanding with questions, quizzes, and tests. The premise in my math teaching is that I know the correct processes and the correct answers. My job is to show the student these processes so they can find the correct answers. In addition to my own evaluation of student progress, the benchmark of my success in covering the prescribed courses is the evaluation tests the ministry gives at the end of grade 10 and the provincial exam at the end of grade 12.

My view of educational drama, on the other hand, is that it should encourage students' creative thinking by inviting them to solve problems through the drama mode. Student learning is a group process rather than an individual one. In my drama classroom, I encourage students to share ideas and possible solutions, for the problems are open ended with no one "correct" answer. The "solution" is usually the consensus of the group. Even this solution is not always the final one, but is changed and modified as circumstances require.

I also encourage students to make their own improvements to the work in progress. For the initial brainstorming sessions we are usually seated in a circle to allow all ideas to be considered equally. As the work progresses I question the students to make them think a little deeper about their work. It is a probing rather than a deliberate attempt to get at a "right" answer. Presentation is not my primary goal, although the work is frequently presented to an audience. Of most concern is the development of the work and the learning inherent in this development. The personal growth of each student is not easily evaluated. Their input is necessary to judge this, in addition to my own observations.

Thus, in my two different teaching areas, I have two different teaching styles. These teaching styles reflect not only the nature of the subjects being taught but my philosophy of how each one should be taught. Both styles were used in implementing Communications 11 but I was not aware of this while I was teaching. It was not until I had reflected on and analyzed my data that I realized that I possessed two teaching styles and that they both had had a strong impact on the progress of the course. The following description of what took place in my classroom is the result of my reflection on and analysis of the data collected. It reveals the knowledge I used when teaching Communications 11 and how I used this knowledge.

Knowledge from Drama

In teaching Communications 11 I was forced to examine what strategies I had for coping with my situation. From the outset I had felt that the only way I could cope with teaching this course was by using my background knowledge in drama. If I could interpret "communication" in its broadest sense, I could teach a quasi-acting course by disguising it as Communications 11. In this way I could combat two problems. I would have an acting class and would also be on familiar ground even though the subject area itself was unfamiliar.

As the work progressed I discovered I had chosen an approach that not only could be adapted to the course but that also allowed the course to be adapted to it. As in my drama courses, I wanted the students to be actively involved in their own learning in the course. I wanted to explore communication with the students instead of trying to instruct them directly. Note the journal entry made in preparation for the first lesson:

> I want to find out what students think Communications 11 means. *Discussion*—round the table—different format might help the students to think differently—they're weak students—I want to encourage their ideas and let them see-I *listen* to *them*.

I was able to start the course by using a previous drama lesson plan. I observed in my journal, "Today's lesson was almost identical to the first lesson in Acting 11 last year. I changed 'teenage interests and problems' to 'communication' but method the same." The ability to adapt materials and ideas from other sources is an integral part of the art of teaching. I had embarked on my quasi-acting course with a familiar strategy that I knew would be successful.

The first idea that was contributed by the students and which could be used in developing the course was a list of the different ways people communicate. They developed the list through their own discussion. I wrote in my journal,

> I didn't make nearly enough of their lists which had good ideas—I want to make up for this by using the lists next lesson somehow . . . . Interesting to see that the students are coming up with the wider view of "communication"—more along my conception.

Using the lists was important not only for the ideas. It was a way of demonstrating my acceptance and approval of students' suggestions. What they had to offer was worthwhile, and I wanted them to know that I thought so. We expanded the lists the next day and used the dramatic technique of "tableaux" (frozen action pictures created by students) to depict the means of communication contained in the lists. Their view of communication was even broader than mine, including such areas as sign language, Braille, Morse code, and even smoke signals. I felt my concept for the course had been justified, and I believe the "meeting of minds" enhanced students' confidence and developed rapport.

By continually being aware of and recording the general reactions of the students, I think I became more sensitive to their needs. I was ready to make adjustments if I thought them necessary. By reading the "pulse" of the class I was brought closer to them and this, in a subtle way, helped in further establishing the rapport. A few lessons later I commented,

> A nice atmosphere—relaxed. I felt this lesson was an important one. I was able to talk to all the students individually or in small groups. There was an atmosphere similar to my drama class last year. I was very pleased to be able to praise their work.

BEST COPY AVAILABLE

The use of my knowledge from drama appeared to be working well, and as I confidently developed lessons around themes taken from the initial communications lists, I inevitably pushed the drama mode further. As time went on, however, a change occurred in my teaching style. I slipped out of the drama mode and into the formality of my mathematics style of teaching. It was at this time that my knowledge of class control stood me in good stead.

A Loss of Focus

Twice it happened that my teaching lost focus and direction and seemed to flounder, but my control of the class did not. I was able to continue teaching and I doubt if the students were aware of the change. In both instances the loss of focus came after active periods of group work using drama techniques. There was a need for a change of pace, a need to "settle down" for a while. It seemed to me that this was probably a good time to start using the textbook. The favorable impression I had formed about the text is recorded in my journal.

> I've been looking at the text, *Writing Sense* [Potter, 1981]. I like the way it's written and presented—pictures, activities, common-sense down-to-earth style. Emphasis seems to be on writing flow rather than grammar. The first four chapters contain ideas I have emphasized with the students—honesty in writing—reading aloud to improve writing.

Philosophically it seemed the perfect book for me to use. It also appeared to be suitable for use by students weak in English as the chapters were short and easy to read. What I did not realize at the time was that each short chapter is on a different topic with no real link between chapters. This deficiency may not create difficulties for a qualified English specialist, but for someone in my position it created an unforeseen problem that I will say more about later.

I had the feeling that I ought to use the text at some point in the course so that I could say I was following the curriculum. My instincts seemed justified when I was told that I was to be evaluated for my teaching report. This knowledge prompted me to write in my journal, "I'm wondering if I have enough marks for the class at the present time—I think I'll have to make specific parts of my lessons markable. The type of work I've been doing is difficult to mark." Not only was the text the prescribed one for the course but it also had exercises in it that were markable.

I used the text two lessons in a row to encourage a feeling of continuity. The actual lessons themselves, however, were not linked as each chapter was on a different topic. My reflection for the lessons shows that the students were not enthusiastic.

> The reading was fine but they did not really apply themselves to the questions—a few of the girls did. The reporting back was not successful—students didn't listen so I eventually abandoned this and got them down to write. . . . I did not have them read aloud as I had planned because of the previous lack of concentration. Instead I had them proof-read each other's work to themselves.

The desks went back in rows as this seemed the appropriate arrangement for students who had to concentrate on individual writing assignments. I think perhaps this was one of the subtle ways in which I was influenced by the textbook. The formality of using the text demanded the formality that I used in math class.

Because each lesson was on a different topic, it meant I was planning one lesson at a time. I wrote, "I'm beginning to feel the need for a little longer planning—one day at a time is difficult." As I limped from lesson to lesson a feeling of desperation began to creep into my journal.

> I am now beginning to get a "swamped" feeling. I am not having enough time to plan and organize because of the work in other classes. I have marking to do all the time. I also feel I am losing my efficiency which is compounding the problem. I am needing help from colleagues. I think I have passed the "going it alone" stage. What are they actually *learning* at the moment—I am beginning to wonder . . . . I am not sure what to do about the books they are reading—do I have them write a report?—or does that kill the enjoyment of the book? Could they communicate the ideas in the book another way? Should I give a deadline by which the book should be read? Better ask my colleagues these questions.

By turning to the textbook I inadvertently moved into a series of short, teacher-directed lessons more like math teaching than drama teaching. This teacher-directed style worked well in math, where I was knowledgeable; in Communications 11, it took me into an area where my knowledge of the subject was at its weakest. I lost my original focus and although my experience as a teacher enabled me to continue teaching without a loss of control or rapport, I was not pleased with the work I was doing.

Back to a Drama Teaching Mode

Toward the end of October a resource book for the course appeared in my box in the office. I found that it contained some philosophical ideas that supported my approach to the course. It emphasized the value of student based literature content and the importance of finding situations in which students want to learn and can find success. Reading the resource book prepared the ground for the development of a new focus and a return to my drama teaching style.

I noticed in the section on short stories a story about nuclear war. Initially I asked the department head for advice on reading the story. He suggested I read it aloud, with the students following in their own books. In my journal I commented, "I thought this would be too similar to them listening to the record, but the fact that they are reading along silently will be sufficiently different." The unfamiliarity of the subject was prompting me to assume I always had to be doing a new activity or slightly varying the activity. Yet I often repeated activities when teaching in my own subject areas.

The reading of the story aloud was not only a natural progression from the silent reading I was doing with the students each lesson but also encouraged me to abandon desks in rows and place them in a circle again. I began to feel the pull of my drama background again and this was evidenced in the first lesson on the new topic of nuclear war. Having read the story to them, we did an activity used by drama teachers called "hot-seat." Several students volunteered to be characters from the story and, in role ourselves, we all asked them questions. This was quite successful and a positive end to the lesson. I was back in my drama mode with a focus that lasted nearly 3 weeks.

Unfortunately, at the end of the 3 weeks, as I again sensed the need to vary the pace, I repeated my previous mistake of using the textbook. By the third lesson I was caught in the one-lesson-at-a-time trap and had returned to the traditional teaching style of my math classes, which included arranging the desks in rows. When I tried to conduct a discussion on phobias without changing the desks, my journal records,

> The discussion tended to be "patchy." Groups would take part but often the others didn't really listen—I had to do my "policeman act."

Again I felt the need to control students' behavior, using body language, direct looks, and spoken admonitions. I was aware that part of the trouble was because of the struggle to think of what to do each lesson. I talked to my husband and he suggested that I follow the example of the head of the English department and give them a project that would last 2 weeks (survival tactics!).

Even though I had done several longer units and knew this was the answer, I needed this reminder. Teaching an unfamiliar subject seems to make a person react in a similar way to being in unfamiliar situations—thinking is thrown off balance and one can miss the obvious. A project had the advantage that, once the parameters had been established, the students would work for several lessons without the teacher having to prepare new lessons. Each lesson would be spent helping the students develop their ideas in the project. I had done many a project with eighth-grade drama students.

Teachers frequently utilize the year's calendar when planning their work. Seasons and specific dates become a meaningful focus for a variety of educational activities. As it was less than 3 weeks to the Christmas holidays I decided to devise a project on the Christmas theme that applied specifically to the course. I felt some intellectual satisfaction in arriving at an idea that would tie together the work done in the term. In groups of about four, the students would make presentations on the theme of Christmas utilizing all the means of communication used in their term's work. In my journal I described how I started the project:

> We then sat in the circle again and I started the discussion on Christmas—why we have it, themes associated with it etc. We then established a list of the forms of communication used so far. They made the major suggestions in both parts of the discussion with some minor prompting from me. . . . They then split up into their groups and started to discuss the project. They seemed interested and enthusiastic.

All the elements I had hoped for at the beginning of the course and had partially lost at two stages during the term combined to make this project a satisfying one for both me and the class. The students were making a positive contribution of their own ideas. They were involved in their own learning and making their own decisions in a relaxed atmosphere under my guidance, not my direction.

A few new developments also occurred during the project. The students started to search out suitable poetry to be part of their presentation—an area we had not explored as yet in the course. Kathy,[a] who had refused to speak in front of the class during the oral presentation on music because of her shyness, read aloud with Wilma during their presentation. One group read a poem as a radio play and Don learned his part by heart. Another group unified all means of communications into an effective dramatic presentation.

BEST COPY AVAILABLE

Reprinted with permission from Educational Leadership, March 1990.

Finding the Value in Evaluation: Self-Assessment in a Middle School Classroom

Portfolios allow teachers to get to know their students—as readers, writers, thinkers, and as human beings.

> . . . We must constantly remind ourselves that the ultimate purpose of evaluation is to enable students to evaluate themselves.
> —Arthur L. Costa (1989)

Sarah was adamant. "They don't know me as a person and a writer. They don't know how I've improved." I watched as Sarah read the one mark on her writing sample—a "7." On a test mandated by our school district, Sarah had received a 7 out of 8, certainly a good score. But it didn't matter. "What does this tell me?" she continued. "I'm one less than an eight and one more than a six. So what?"

Sarah was right. The writing sample didn't show who she was as a person or a writer. And the response she received didn't help her. No one who had read her piece knew where she'd been, so how could any one tell how much she had grown? How sad, I thought, especially when all the evidence was right here in the classroom.

A Wealth of Information

The evidence was in Sarah's portfolio. In my classroom, portfolios have become each student's story of who they are as readers and writers, rich with the evidence of what they are able to do and how they are able to do it. Each portfolio is a collection of each student's best work.

I impose the *external* criteria for the portfolios—each student's two best pieces chosen during a six-week period from his or her working folder, trimester self-evaluations of process and product, and, at year's end, a reading/writing project. The students determine the *internal* criteria—which pieces, for their own reasons. I invite them to work on reading and writing from other disciplines and to include them in their portfolios, if they think the efforts are some of their best. Here are some examples. Joel's portfolio has a piece entitled "The King and His Achievements," a paper he wrote for social studies but worked on in a remedial reading class and in English. Sara and Jennifer each included a children's book they wrote collaboratively about a little boy investigating tidal pools along the coast of Maine. It was written for science, based on their field trips, as part of their study of marine biology. In English class Jen wrote, while Sara, studying the work of Trina Schart Hyman and Jan Brett, drew the illustrations.

Teacher as Learner

My classroom was not always like this. It has evolved slowly. I used to make all the decisions about what the students read and wrote and what they learned from that reading and writing. Then I would test them on all the information.

But times have changed. I've been turning the responsibility for learning over to them—they choose what they write, what they read, and what they

Photographs by James [illegible]

Two students at Oyster River Middle School in Durham, New Hampshire, discuss how to arrange their writing from most to least effective in their portfolios.

need to work on in order to get better at both. I invite them to try different genres of writing, and I share a variety of literature that I love with them. They used to keep writing folders and were judged on all their writing. Now *they* select the best pieces to revise and rework. The portfolio of best pieces is separate from the working folder.

My students, however, aren't the only ones who keep portfolios. I also keep a portfolio. My reasoning is that if I don't value what I ask my students to do, then they probably won't value it either. What's in my portfolio? An education article entitled "Seeking Diversity," a poem, a personal narrative about my mother's sewing, and a letter written to the governor nominating our parent group for a state award for support of our Arts in Education program. I begin my writing and reading with the students. I share my drafts in progress. If I'm going to trust and value my students as learners, I have to trust my own possibilities as a learner.

Evaluation, the Last Holdout

For years I was the final decision maker about how well each student did. But then I began to wonder what would happen if I considered my students the best evaluators of their own writing and reading, both in progress and as a final product. I decided to find out. I not only let them choose their own topics, but I let them choose the pieces that were going best. So that they would have a selection to choose from, I asked them to write at least five rough draft pages a week. Further, I not only let them choose their own books, but I let them select the ones they wanted to respond or react to.

Over time, I began to see more diversity and depth to their writing, their reading, and their responses to literature. I discovered that the students knew themselves as learners

I impose the *external* criteria for the portfolios, and my students determine the *internal* criteria.

As students learn to critique their works, their abilities as writers and readers often deepen in the process.

better than anyone else. They set goals for themselves and judged how well they had reached those goals. They thoughtfully and honestly evaluated their own learning with far more detail and introspection than I thought possible. Ultimately, they showed me who they were as readers, writers, thinkers, and human beings.

As teachers/learners, we have to believe in the possibilities of our students by trusting them to show us what they know and valuing what they are able to do with that knowledge. The process of turning learning back to the students, from choice of topic or book all the way through to the evaluation of their own processes/products, produces students like Nahanni. I chose Nahanni, not because she had the best portfolio, not because she was the most articulate, but because she was a little better able to reflect on what she did. Through Nahanni's portfolio I want to show the possibilities in diversity, depth, growth, and self-evaluation. This kind of evidence shows the value in evaluation.

One Student's Story

Nahanni's portfolio is typical of the diversity and depth of writing I am now seeing in my students. She has 10 final drafts: 3 poems, a personal narrative, a character sketch, a letter, a pen and ink drawing, a play, an essay, and a picture of her final project for the year, an acrylic collage representing her interpretation of the book *Night* by Elie Wiesel. Everything that contributed to the final draft—lists, rough drafts, sketches of ideas—is attached to the final draft of each piece. Nahanni's evaluations of herself as a writer and reader are also in the portfolio, just as they are for all my students.

Nahanni ranked the following poem as her best piece for the year.

> Looking across rows of music stands
> I see an ordinary face—
> a quarter note on a sheet of paper.
> I know the face has laughed and cheered,
> and laughed some more,
> and cried.
> Violins raise, bows sway, and the ordinary quarter note frowns and comes alive.
> The lone quarter note is gently carried off the page and lightly danced onto the air.
> Hidden behind Beethoven's Fourth, one little
> second plays along.
> A royal theme, issued from the staff,
> fades, then crescendos to a wail.
> My loving ear fills up with sounds
> of staccato arpeggios, an Allegro,
> and a triste.
> And so, to my dear little—quote—
> unimportant second,
> I give my ballad of soft support.
> Bring your laughter and your cheers,
> your sorrows, and your fears,
> We'll laugh together, heal the pains,
> use up some tears.
> We'll share in both.

Nahanni reflected on her poem and why she chose it:

> My best piece is my best . . . because it meant the most to me. I used music to portray a friendship. I think there are layers of understanding, and to enjoy the poem you don't need to understand all the layers.
>
> The piece that is the least effective means nothing to me. It was an assignment. That's why the pieces that are my best are so important. I chose topics that were important to me.
>
> Now I know that in order to write something well, you have to care about it. The first important thing is that you like a piece of writing, then you worry if anyone else likes it . . . I've learned to add detail to get something across. I've learned to care about my writing and write in order to resolve things, because even when I read a piece over, I always learn something.
>
> I think writing is like visiting places, you see different things each time. You read a piece of writing and you think you read it and saw it, but then you go back and read it again and see new things . . .
>
> Writing isn't just a school subject. It's part of how we think. I write because I need to figure out what I'm thinking.

Nahanni's final version of the poem, though, is a far cry from her first draft, which looked like this.

> Letter to my best friend—You are my very best friend and I think you know I don't mean that in what you'd call a "superficial" way . . . It feels like we are always one person. I want you to know how much I care about you. Never forget me, I will NEVER forget you. The times with you will never leave me.

How did she get from this early draft to a quite different final version? For some insight, let's look at Nahanni's second draft, exactly as she wrote it:

> Two worlds collided and they could never ever tear us apart.
> Two hearts that can beat as one, there aren't a single thing we can't overcome.
> We're indestructable.
> The light of a billion stars pales
> As we comfort each other . . .
> . . . the universe and a billion stars—and you and me.
> Crowded there with others or alone.
> At times it seems—we will always be together
> So bring your laughter and your cheers
> your sorrows, and your fears.
> We'll heal the pains, use up some tears,
> we'll share in both.
> poem or letter? [She asks herself.]

Nahanni explained that her first breakthrough on this piece came when she answered my question, "Where did you first think of writing this to your friend?" She said she looked up across rows of music stands and saw her friend—this ordinary

BEST COPY AVAILABLE

face. I asked, "What's an ordinary face look like?"

She continued, "Like . . . like . . . a quarter note on a sheet of paper . . . just an ordinary note." And Nahanni was off. She made lists of musical terms. Played with them in phrases. Literally cut the phrases apart and made two piles—the ones that related best to what she was trying to say about friendship and the ones that didn't feel right to her. She read drafts in progress to her peers and to me for responses to what was working, to hear the questions we had, and to get suggestions.

I prompted her to elaborate on the poem's development.

> In my first draft I didn't tie in much about music to my theme of a person—or face. I made a quarter note be the face. I use a piece of music to interpret what the face fears and what I feel about that face. I feel now that what I have to say is more important than trying to shape and twist the words into specific phrases and lines. This is one of my best pieces because I've worked so hard, making all the words say exactly what I want to mean.

At the beginning of the year, Nahanni had set three goals for herself: to try writing poems (which, as we have seen, she has done), to write longer pieces, and to send a piece off for consideration for publication. To meet her second goal, she wrote a prose piece entitled "Melted Wax." At first, she had steered away from writing long pieces because she was "afraid of losing peoples' focus, or maybe I'm afraid I'll lose my own focus." She discussed how the piece came together:

> I was brainstorming all the positives and negatives in my life . . . trying to think of a way to write down what I thought of Linda's death. One of the things that makes the piece good is the layers of depth that people can find. Most people can come up with the point of the candles . . . but if they don't, they can still enjoy it. I changed the lead all around. My first lead was dull and didn't say much. Now it starts with a quote and pulls people in better.

Nahanni also accomplished her third goal: to send a piece for publication. The poem she selected had gone through as many changes as her first poem.

My students choose what they write, what they read, and what they need to work on in order to get better at both.

> I like this poem, but it doesn't have that much meaning to me. I sent it to *Merlyn's Pen*, and that's what they told me. I knew they would. I think I'll make it how they'd like it since if it's changed, it's not a problem for me because I don't think it's perfect the way it is. It's not for me that I want to keep it that way. Like the poem I wrote for my friend, "Looking Across Rows of Music Stands." I wouldn't change that no matter what anybody thinks. It's for me—and my friend.

This year Nahanni started reading 30 books—and finished 29. Her favorites were *The Little Prince* (de Saint Exupery), *One Child* (Hayden), *The Chocolate War* (Cormier), *Beyond the Chocolate War* (Cormier), *Night* (Wiesel), and *The Princess Bride* (Goldman). She has formed some definite opinions on the subject of reading.

> In order to be a good reader, I think you must read a lot and think about what you are reading—how it relates to you, what the writer wants you to think versus what you really get out of it. The responses I got to my reactions to the books were written or asked in such a way that I feel my ideas are important, and that makes me think more.

> I wanted to read faster . . . I don't think I accomplished this, except that now I read more than I did before. I don't think [reading faster] was a really important goal. I wanted to understand more, and I think I've done that.

Nahanni believes that if a book is really good, you can learn a lot about what the author thinks about life. In a good book, the meaning is made clear so that "I think I've discovered it on my own, not so it was told to me."

Nahanni doesn't think she consciously connects reading and writing, but listen to what she consciously does.

> I think I've been looking a lot more for metaphors and hidden meanings in my reading. This is a result of my change in writing—or vice-versa. I think that now I look for things that aren't so obvious. I've discovered that those things mean so much to me. The words that are unwritten teach much stronger than words on paper.

Self-Evaluation, Self-Discovery

I don't have to be the sole evaluator of Nahanni's writing and reading. She's far better at it than I am. And the better she knows her own process as a writer and reader, the better she becomes at both. But I *can* evaluate Nahanni's growth as a writer and reader if I have to. I have all the evidence in front of me in her drafts of writing from rough to final, in her responses and reactions to what she's reading, and in her self-evaluations of herself as a writer and reader. As teachers, we must listen first to the perceptions our students have of themselves—and address what they think they can and cannot do. From what Nahanni showed me, I wrote the following narrative about her growth as a learner.

> Nahanni has become an independent learner who reads and writes for her purposes because she wants to become better at what she does. Her reading and writing show me she is engaged in the excitement of learning. She is a keen observer of life around her, often finding topics because she is always looking. She has an acute sense of detail, able to see, hear, smell, touch, and feel things that many of us miss, all with a sensitivity to the human factor. She is a caring, sensitive young woman who leaves an impact.
>
> As a writer Nahanni knows how to find a topic, how to play with words until they say exactly what she means, how to seek help for revision, how to use a variety of resources, how to ask questions, and how to answer them. She is not afraid to take risks with new genres. She has tried poetry this year, while still attempting a variety of prose pieces. There is always a meaning to her writing—a reason to read it. She has a message for her reader, because the message is always for her, first.
>
> Nahanni has an acute sense of audience. After receiving a rejection from one magazine I asked her if she wanted to revise the piece and resubmit it. "No," she said, "this wasn't for the magazine anyway." Another piece she will revise because it wasn't for her alone.

Her images are fresh and vivid. She searches for precise words. Her dedication is evident in her willingness to revise until pieces say exactly what she means, in the appropriate format. She grapples with big issues: friendship, control, love, prejudice, hate, fear, uniqueness.

She is a thoughtful reader who reads a variety of books for a variety of reasons: some to make her think, others just for fun. She knows how to take meaning to and meaning from a book. She relates her own life experiences to the experiences she draws from books. She comprehends, analyzes, reflects, contrasts, compares, synthesizes, wonders, questions, and criticizes literature.

I believe her writing has changed her perceptions as a reader. At first she just wondered why authors did certain things, now she reflects on how she would have done it differently. Nahanni writes and reads to find out what she is thinking.

Adapting Portfolios for Large-Scale Use

Jay Simmons

Current large-scale methods of assessing writing ability operate with little real engagement by teachers or students. They also yield unnaturally low scores, especially for weaker students, fail to describe how writers of differing ability actually behave, and offer no instructional strategies tailored to specific achievement groups.

My research team in Durham, New Hampshire, has successfully pilot-tested an alternative to holistically-scored, timed writing samples that corrects these shortcomings without added cost. Our results indicate that self-selected portfolios of their best work are significantly better than timed tests in estimating students' writing abilities.

Our research team used portfolios to measure production, perception, and reflection (as suggested by Howard Gardner [Brandt 1988])[1] across a population of 27 randomly selected 5th graders. They chose their three best pieces finished during the school year and then wrote a timed-test sample, all of which we rated holistically.

For the portfolio assessment, we recorded such factors as paper length, mode of discourse, and range of modes included in the portfolio. Both students and raters listed strengths of the papers, so that we might see how well student reflections on the qualities of their papers matched those of adult raters.

When we compared the timed-test scores with the median score in the portfolio assessment, we found that timed tests significantly underestimated writing ability, especially of the weaker writers. Students who scored 2 or 3 on the timed test averaged 4.7 on the median portfolio piece, the same as those who scored 4 or 5 on the timed test!

Portfolio assessment identified writing habits associated with certain performance levels: those scoring highest produced longer, more varied portfolios. When students limited their range of modes of discourse, they relied on narrative, a form learned earlier in school. The lower the test score, the more the writer chose narrative exclusively for the portfolio.

Teachers can use the information that the portfolio assessment makes available about the behaviors and attitudes of writers of differing abilities to tailor their instruction. For example, those scoring lowest on the test seem to need vocabulary development and practice choosing shorter tasks when time is limited. The average writers in our 5th grade sample need to expand the range and depth of their writing choices, while emphasizing the overall flavor of the work. In narratives this may mean developing characters and motivating plot developments.

In 1989–90, Seacoast Educational Services of Somerworth, New Hampshire, a consortium of 12 school districts, will collect and analyze portfolios of 5th, 8th and 11th graders by randomly selecting a representative subset of the approximately 4,000 students in the population. Although both timed-test and writing folder pieces will be included, only one testing session will interrupt the instructional year.

Our field test scored just over 100 papers; the Seacoast project will handle more than 1,500. This will give the 12 districts more accurate and valid scores and more descriptive information about their students' writing. It will give their teachers statistical profiles of the writing behavior of the students and a more refined version of a naturalistic model for large-scale writing assessment through portfolios.

[1] R. Brandt, (December 1987/January 1988), "On Assessment in the Arts: A Conversation with Howard Gardner," *Educational Leadership*, 45: 30–34.

Jay Simmons is an English teacher, Oyster River High School, Coe Drive, Durham, NH 03824.

What Can Teachers Do?

Will the portfolio concept work in every classroom? Yes, but certain conditions must be present. First, students must be immersed in reading, writing, speaking, and listening. Second, they need to be given time to do so in large blocks. Third, they must be given choices about what they are doing. And, fourth, they must receive positive response to their ideas.

Once these conditions exist, teachers can introduce the concept of portfolios: as places where students collect evidence of who they are as readers and writers. It's also a great idea to keep and share your own portfolio. The more I discover what I can do, the higher my expectations are of what kids can do. They seldom disappoint me. Second, so that your students have a quantity of writing and reading from which to make their selections, it's a good idea to ask them to produce, say, five rough draft pages of writing a week and to read for at least a half hour each night. Third, each trimester (other teachers might choose other time periods), ask your students to arrange their writing from most effective to least effective and to evaluate it by considering the following questions:

- What makes this your best piece?
- How did you go about writing it?
- What problems did you encounter?
- How did you solve them?
- What makes your most effective piece different from your least effective piece?
- What goals did you set for yourself?
- How well did you accomplish them?
- What are your goals for the next 12 weeks?

Finally, if you have to grade your students, base the grade on goals set and achieved as evidenced in the portfolio of only their best work.

The Kind of Evaluation That Matters

Nahanni is not the exception in my class. She is becoming the norm. She is motivated and persistent, and she cares about learning. She reads and writes for real reasons. Through her portfolio, I know her as a reader, writer, thinker, and human being, not as a "5" or a "7." Through their portfolios, I know all my students. They, like Nahanni, are articulate learners because they continually *practice* discussing what they know and how they know it: with me, their peers, and with the community. They do so, for example, by sharing with other grade levels, teaching teachers at writing workshops, and publishing locally and nationally.

Learning to make meaning in writing and reading is not objective, as our evaluation systems would seem to indicate. We must become more flexible in our assessment of students' work. When kids are given choices in what they read and what they write, and time to think about what they are doing, their writing and reading get better. When we trust them to set goals and to evaluate their learning in progress, we will begin to realize that they know much more than we allow them to tell us through our set curriculums and standardized tests. If our goals are to keep students reading and writing, to help them get better at both, and to help them become independent learners, then we must nurture self-evaluation of writing and reading in progress. This is the kind of evaluation that matters—because it is for Nahanni, for Joel, for Sarah. Who else is evaluation for?☐

Portfolios give teachers insights into their students' growth not possible through traditional assessment measures.

Reference

Costa, A.L. (April 1989). "Re-assessing Assessment." *Educational Leadership* 46: 2.

Linda Rief teaches 7th and 8th grade at Oyster River Middle School in Durham, New Hampshire. She is also an instructor in the University of New Hampshire's Summer Reading and Writing Program and has worked extensively with Donald Graves. She may be reached at RFD 2, Edgerly-Garrison Rd., Durham, NH 03824.

Reprinted with permission from the Middle School Journal, November 1990.

a new contributor

Middle level teachers' perceptions of action research

Deborah Sardo Brown

Brown

Recently many authors have contended that one important way to promote the reform of schools is to involve teachers in doing research in their own classrooms (Casanova, 1989; Hovda & Kyle, 1984). Since action research is conducted by the practitioner, it provides a way for teachers to investigate issues of interest or concern in their classroom and to incorporate the results into future teaching. This process, which begins with teachers' questions and aims at influencing practice, affords the opportunity for teachers to have greater responsibility for directing their own professional development. Action research, then, is a classroom based study, planned and carried out by the person most likely to be interested in and affected by the findings--the teacher. While many authors promote teachers' involvement in research as a way in which to empower teachers and increase their role in school-wide decision making (Maeroff, 1988), few studies have surveyed teachers who conduct research in their classrooms for their perceptions about the outcomes of such research.

The present investigation describes the action research studies of six teachers who were in the first year of a transitional process from junior highs to middle schools. The teachers all worked in the same large, urban school district and all attended the same graduate degree program that required an action research project for the master's degree. When surveyed, each teacher had just completed a written report of findings gathered during the project. The teachers responded to an open-ended questionnaire that asked them to share their perceptions of the research process.

Description of action research studies

The six middle school teachers studied a wide variety of issues in their action research projects. All six collected quantitative information as well as qualitative descriptions during the course of their studies.

Clell was interested in studying the relationship between television viewing and students' performance on unit tests in social studies. Prior to taking a unit test, he required sixty of his seventh grade students to keep logs for three weeks in which they described their viewing habits. Clell then looked for patterns between the number of hours children reported watching television per day and unit test scores. Clell found that students who viewed two hours or less of television per day tended to score much higher on the unit test than those who viewed television more than five hours per day. As a result of his project, Clell is now developing strategies that encourage students to participate in alternative activities to television viewing.

Laura wanted to know how a thematic non-basal reading program she developed would affect middle level students' skill mastery and interest in reading. After teaching her newly developed program to 23 students over an eight week period she compared student scores on a teacher-developed skill mastery test to scores from the previous semester, compared pre- and post-test scores on a reading interest inventory, and read student journal entries. Laura found that both skill mastery and student interest in reading increased. Laura plans to integrate her thematic reading program with the district's new whole language basal system during the next school year.

June wished to know if eighth grade students exposed to a suggestopedic method of instruction would learn multiplication facts better than students taught with a traditional, non-suggestopedic method. The suggestopedic method, which facilitates stress free learning and involves both the right and left brain hemispheres, involved students breathing slowly to the beat of baroque music as they listened to a tape recorded series of multiplication facts. June found that a treatment group of 29 students did not score any higher on a multiplication test than the control group of 26 who were not exposed to suggestopedic techniques. She is continuing to study the effects of the dual-hemisphere approach on other classes of students.

Mary wanted to know if educable mentally handicapped students would increase their initiation of both verbal and non-verbal communication as a result of being involved in cooperative learning. Mary audio and videotaped students before, during, and after cooperative learning. Both during and after cooperative learning students showed an increase in initiating both verbal and non-verbal behaviors when compared to before the cooperative learning treatment. Mary is now studying the effects of cooperative learning on students' self esteem.

Louise studied how 47 middle level teachers perceived the identification and referral process for student placement in special education programs. Teachers filled out a Likert scale questionnaire and wrote answers to open-ended questions that inquired about the referral process. A majority of teachers indicated they had had difficulty with terminology, definitions, and procedures involved in the referral process. Teachers reported that although they referred a number of students for special education placement, they only attended staffings on these students some of the time. As a result of this study, Louise is now writing a special education handbook for classroom teachers that is designed to provide them with the basic information needed to become skilled participants in the referral process.

Floyd studied the effects of a cooperative learning approach on middle level students' achievement and interest in science. Although there were no clear gains in science achievement as measured by standardized tests, students did show an increased interest in science. Floyd is now refining his cooperative approach for next year's students.

Teachers' perceptions of research

Among the questions that guided this study were:

1. How does doing research help a teacher master the art of teaching?

2. What are your opinions of educational research in general?

3. What are your opinions about classroom teachers doing action research?

4. What advice would you give to another classroom teacher who is about to embark on an action research project?

5. How do you think your action research project will affect life in your classroom?

6. Describe any interest you may have in future research endeavors.

The responses of these middle level teachers corroborate the generally held notion that as a result of doing research in their classrooms, teachers become more keen observers of classroom life and blossom into more well-informed instructional decision makers. An additional benefit noted by each teacher was that the results of action research were expected to dramatically change the way they planned for instruction during the next school year. A myriad of other benefits reported by these teachers may be cited when presenting the case for teachers conducting research. Among these incentives are that action research will aid the teacher in evaluating new methods of instruction or curricula, clarify the teacher's theories and beliefs, promote collegial interaction, infuse excitement into teaching, and result in increased student interest in learning.

These findings indicate that teachers in middle level teacher education programs should also be encouraged to incorporate action research into their instructional planning routine. Such a step would help student teachers to become more reflective about practice and revise instructional plans to reflect new information gathered from cooperating teachers, college supervisors, and the research literature.

Despite the benefits teachers derived from doing action research, opinions were mixed about the usefulness of educational research in general and the feasibility of teachers conducting research in their own classrooms. These findings indicate some possible explanations for why some teachers view research negatively and resist involvement in school based research projects. Among the reasons identified in the present study are the following:

1. Teachers perceive research to be too slow, citing the fact that it often takes several years from the time a study is completed until research findings are available in educational journals.

2. Teachers perceive research studies published in journals as often written in esoteric language they cannot understand.

3. Teachers perceive the samples used in research studies as too dissimilar to their students to warrant generalizability.

4. Teachers perceive researchers to treat the study of educational issues too much like a science instead of an art.

Perhaps educational researchers and those who teach classes in research need to become more sensitive to these teacher-held perceptions.

As an outgrowth of such frustrations teachers can be encouraged to do research themselves. Based on the present study's findings, however, this suggestion comes with its own set of caveats. Teachers were divided as to whether or not they thought the notion of teachers doing research was feasible. The major problems teachers listed included the interference of research-related activities with contractual obligations such as extracurricular assignments and nonteaching duties during the school day, the lack of time to do research, and the difficulty of finding other classrooms in teachers' schools to participate in the research.

These findings suggest that administrators need to plan how to allow teachers adequate time to pursue classroom research projects. In addition, leadership at the school level needs to be taken to involve multiple teachers and classrooms in research projects. Such a measure would promote collegial exchange between teachers themselves and between teachers and school administration.

In spite of the numerous difficulties these teachers felt accompanied action research, most reported a desire to undertake another research project in their own classrooms and several even had specific plans developed for their next research study. There were other outgrowths as well: writing grant proposals to fund future projects, including classroom research findings in parent presentations, presenting research findings at professional conferences, and the increased support from teachers for district changes--the transition from junior highs to middle schools and from basal to thematic, whole language instruction.

Implications

First, these findings show that middle level teachers will pursue classroom research despite a number of perceived barriers. Second, doing research apparently contributed to a greater sense of professionalism in these teachers. The systematic documentation of classroom events enabled them to approach parents with increased confidence and also facilitated their involvement in professional conferences and related research activities. Third, there is also the suggestion that one way to instill teacher ownership of district wide changes and even facilitate teachers' acceptance of such changes, is to involve them in doing action research in their classrooms.

Because of their involvement in action research, these six teachers were able to contribute to their newly formed middle schools. Cleil developed a program designed to decrease students' television viewing time. Laura integrated her own thematic reading program with the district's newly developed whole language basal system. June continued to teach students using both right and left hemisphere approaches. Mary permanently included a cooperative learning strategy into the teaching of her EMH classes. Louise developed a special education handbook that defined terminology used in the referral process for all middle level teachers. Floyd refined his cooperative instructional approach for the upcoming school year.

Together these efforts represent the best of middle level education as teachers take steps to deal with issues relevant to their young adolescent students. By incorporating the results of recent research into their teaching, building collegial relations, and increasing teacher participation in school-wide decision making, these teachers are promoting educational reform.

References

Casanova, V. (1989). Research and practice--we can integrate them. *N.E.A. Today, 7*(6), 44-49.

Hovda, R.A., & Kyle, D.W. (1984). Action research: A professional development possibility. *Middle School Journal, 15*(3), 21-23.

Maeroff, G. (1988). A blueprint for empowering teachers. *Kappan, 69*, 473-477.

Deborah Sardo Brown teaches at Friends University, Wichita, Kansas.

BEST COPY AVAILABLE

SECTION 3

Reprinted with permission from Education and Urban Society, Vol. 22 No. 2, February 1990.

EFFECTIVE ADMINISTRATION THROUGH REFLECTIVE PRACTICE

ANN WEAVER HART
University of Utah

> . . . While we cannot learn or be taught to think, we do have to learn how to think well, especially how to acquire the general habit of reflecting.
>
> John Dewey

In schools dominated by immediacy and contingency, the assertion that reflection improves administration sometimes elicits the cynical retort that professors have a bias for thought and against action. Those who ascribe to this belief argue that by calling for more reflective practice scholars may be falling into an egoistic trap — trying to create administrators more like themselves than like effective administrators.[1] Administrative practice is interactive, not personal and introspective, and demands action.

Were reflection exclusively the process of thinking about one's experiences quietly and calmly, the debate might properly end here. But reflection can be much more. It can encompass the integration of knowledge and action through thought. This view of reflection requires the belief that action is improved by thought. For this article, I accept this connection between thought and act, relying on a notion of reflection more like Dewey's (1933) to argue for the value of reflection in administrative practice. I argue that thinking well, especially developing the habit of reflecting on what one knows before and while acting, improves the quality and creativity of choices and eventually contributes to the knowledge available in subsequent choices. In this way, administration is improved. From this expanded perspective, reflective practice can provide a key to more effective administration.

Practitioners and scholars tell us that school administrators, under the press of daily work, tend to rely mostly on experiential knowledge. This approach is not wrong, but it is limited. In this article, I argue that, to become a more effective administrator through reflective practice, a person needs to use new and different sources of information, integrate this expanded knowledge base, and translate the resulting self- and organizational awareness into

EDUCATION AND URBAN SOCIETY, Vol. 22 No. 2, February 1990 153-169

© 1990 Sage Publications, Inc.

action toward school improvement. To do this, I first examine three sources of knowledge. I then show how administrators can use them to expand their repertoire of action choices and improve their decision making. Finally, I demonstrate that the reflective administrator, now open to multiple sources and interpretations of knowledge, can use reflection to integrate knowledge and action in pursuit of better schools. This final step improves not only the application of "scholarly knowledge" to the practice of school administration, but also an administrator's awareness and understanding of the experiential knowledge on which he or she has previously drawn more or less unconsciously.

The argument which follows illustrates how the integration of knowledge, thought, and action through reflection can improve the administration of schools in a variety of ways. First, reflection enhances the probability of action consistent with conscious, long range aims; administrators can spend less time reacting to the vivid and pressing stimuli common in daily activities. Much has been made of the continuous press and fragmentation of administrative work. Administrators describe themselves as "putting out fires" or complain that they "didn't get a thing done" because all they did was "talk on the phone." These are accurate descriptions of people's experience with administrative roles, and, without skill and intellectual artistry, these characteristics of managerial work can bury the most ardent and well-meaning administrator. By tapping the resource of reflective practice, administrators can be more conscious of the outcomes that their actions promote, and this awareness is enriched with meanings and associations that integrate the behavior of the adults who work in schools with the purposes and goals of schooling, thereby capitalizing on the power of language, symbol, and meaning.

Second, reflection makes possible systematic analyses and interventions that challenge conventional practice and facilitate the search for new perspectives and solutions. Reflection requires that many possible choices for action be considered; alternative suggestions compete with each other and the more alternatives, the better the interaction. The integration of thought and action critical to the central arguments of this article affect this outcome. Reflection also includes open-mindedness, whole-heartedness, and responsibility. These features open administrators to learning and using techniques and faculties of which they were previously unaware. Dewey (1933, p. 128) restates the Greeks' version of the dilemma raised by inquiry into the unknown, a characteristic feature of reflection: "How is learning (or inquiry) possible? For either we know already what we are after, and then we do not learn or inquire; or we do not know, and then we cannot inquire, for we do not know what to look for." Reflection allows professionals to simultaneously discover that they do not know, and yet to shape the nature of their inquiry. In part, this dilemma is addressed by the reflective process, which raises new questions and redefines "perplexities" into problems that spark inquiry. The necessary role of doubt in reflection – one does not long reflect on an issue about which one is sure – makes this expansive application of knowledge possible, because doubt makes all suggestions tentative and experimental, opening the administrator to the unexpected.

> Our progress in genuine knowledge always consists *in part in the discovery of something not understood in what had previously been taken for granted as plain, obvious, matter-of-course, and in part in using meanings that are directly grasped as instruments for getting hold of obscure and doubtful meanings.* (Dewey, 1933, p. 140; emphasis in the original)

Third, reflection raises to a conscious level the unconscious thoughts, assumptions and patterns that guide actions, making change possible. No one sets out to accomplish goals without a view of reality that serves as a reason or justification. The ideas and images in the mind are invisible powers that shape and organize our choices and understanding. Often unconscious, the "schema" that serves to make sense of a new experience and new information can be brought to the conscious level for deliberate inspection.

A final benefit of reflective practice derives from its relevance for the integration of theory and practice in administration. By combining reflection on knowledge with the requirements of action, reflective practice resolves some of the apparent disharmony between the demands of practice and the development and use of knowledge. The popular view of administration emphasizes discontinuities between practice and the development of a systematic knowledge base. Schön (1987), for example, described the "indeterminate" character of practice. The disharmony between the fundamental natures of academic study and administrative practice is clear. Reflective practice holds potential for adding new dimensions to academic study, combatting the institutionalized dilemma of rigor or relevance in the setting in which administrators must act, because "it is extremely difficult in a university setting to achieve focused, long term continuity of attention and commitment to work on the institutional and intellectual problems of a school" (Schon, 1987, p. 309, 310).

In order for these benefits to accrue, there must be something to think about, and reflection must expand the repertoire of quality action choices available to administrators. If this is the case, reflection can improve the organization and management of schooling by providing a useful [illegible] for administrators to exploit knowledge toward desired ends. Even in the face of the "one-minute manager" and studies verifying that administrative work is fragmented, interactive, and dispersed in focus (Kmetz & Willower, 1982, Martin & Willower, 1981; Mintzberg, 1973), I believe that this is the case.

AN EXPANDED KNOWLEDGE BASE: THREE WAYS OF KNOWING

The first condition necessary if reflection is to improve school administration is the existence of applicable knowledge. This knowledge may come from many sources and in a variety of forms. For example, educational administrators have acknowledged for years that many academic disciplines – sociology, social psychology, history, philosophy, political science, economics, and so on – contribute to a knowledge base for the field, even though the exact content of this knowledge base is often the subject of debate (Campbell, Fleming, Newell, & Bennion, 1987).

The forms of knowledge and the ways of knowing on which reflective administrators can draw also vary. Knowledge can be theoretical, empirical, or experiential (Garrison, 1986). Each way of knowing engages knowledge and action in different ways useful to administrators.

THEORETICAL WAYS OF KNOWING

Theory often is the subject of vigorous criticism from those who work and struggle in schools, yet it provides a universal way of organizing knowledge into patterns that are useful for identification and comparison. Theoretical knowledge encompasses the general or abstract principles of a body of facts, a science, or an art. It provides a basis on which to both organize the search for new facts and establish their relationships to existing knowledge, providing a way to explain generally observed phenomena (such as the ways in which leaders emerge in small, leaderless groups of people).

Theoretical knowledge can provide frameworks for establishing and categorizing patterns of problems in administration. For example, role theory (Biddle, 1979) is widely applied to schools to in order help understand the stress, ambiguity, and conflict that people experience from the different roles in which they function. Principals often feel the pressures that come from conflicting role expectations -- unconditional supporter of teachers, instructional leader/supervisor, student advocate, loyal district bureaucrat, and pillar of the community.

The Job Characteristics Model (JCM) of work design is an example of another theoretical construct that enables administrators to assess their own supervisory behavior and to critically examine recent reform initiatives calling for the restructuring of schools. Developed by Hackman and his colleagues (Hackman & Oldham, 1980), the JCM identifies a job's objective, structural features that motivate workers to perform well and that increase their satisfaction with their work, and also identifies the social and individual factors that moderate this effect. Using this model, individual jobs can be assessed to obtain a motivating potential score. Researchers and managers hope to use these scores to design jobs that are more motivating for people in all walks of life. During the theory's development, testing, and elaboration, scholars and managers added new knowledge about the individual differences and the work site dynamics that influence and modify the effects of job structure on job outcomes. Applied to schools, this theory and others related to it could provide guidelines for work reformers seeking to attract and retain a larger share of talented young people choosing careers (Hart, in press). While continually being modified, this "map" of work characteristics and site dynamics critical to the success of restructuring reforms can point educational administrators in promising directions.

Other examples of the ways in which theoretical knowledge advances the practice of school administration abound. Theories of ethics, organizations, political science, or economics can illuminate important issues confronting administrators. With greater understanding of these far reaching issues, administrators can become more astute in identifying problems that stem from economic and political pressures, and in resolving ethical dilemmas that arise from both conflicts of belief among students, teachers, and parents, and conflicts of philosophy among administrators, teachers, and patrons.

Within broad categories, theories, like maps, provide guidelines that assist administrators in defining problems and identifying choices for action in the social world of schools.[7] A map metaphor for theories is useful in several ways. It allows its users to assess goodness of fit—providing paths to follow—and it emphasizes that accuracy can be continually improved by dogged investigation, interpretation, and insight. Just because you merely got where you wanted to go with an old map does not mean that you cannot get there more easily and quickly with a better map. Anyone who, like myself, has ever spent a thunder and lightning filled night high above the timberline on the slope of the "wrong" mountain has developed a sharply defined appreciation for fit, interpretation, and understanding of maps. My experience in Windriver Mountains taught me the map lesson very well that roaring, purple night above Shoestring Lake.

Much to my disappointment, theories, like maps, never approximate the richness of the world they represent. Although they can help us find our way, they cannot walk us to our destination. Theories project an interpretable and useful image, but they are no substitute for the reality they represent in symbol and allegory. Other ways of knowing can add important details.

EMPIRICAL WAYS OF KNOWING

Empirical knowledge adds a second dimension of knowing to an administrator's reflection—details on the map that can be compared with the "real" world. Empiricism demands evidence confirming or disconfirming goodness of fit. Empirical evidence makes administrators more confident that a given action is likely to result in a definable and restricted array of outcomes. This evidence can be accumulated in many ways—highly controlled experiments in laboratories (high reliability, low generalizability), field experiments in real schools (lower reliability, more generalizability), analyses of large actuarial data sets (searching for sweeping patterns), or field studies of highly personal experiences (providing vivid, individual relevance). Dewey (1933, p. 97) elucidated empiricism's essential features saying that "we discriminate between beliefs that rest upon tested evidence and those that do not" and that we are on our guard to establish the "kind and degree of assent or belief that is justified." Like theoretical knowledge, empirical knowledge requires that administrators assess the quality of the evidence, its fit in the given circumstances, and the depth of understanding provided by the analysis. Detailed but inaccurate features on a map are worse than useless.

The importance of being able to understand empirical knowledge was brought home to me by my experience as a new principal in a junior high school. Because student achievement is such a sensitive and critical issue in our assessment of schools, I was interested in the standardized achievement test scores of the students in the school to which I had been assigned. The retiring principal proudly displayed the test scores of the students in "his school." Eighth grade students were averaging well above the 10th grade norm on the California Test of Basic Skills (CTBS). This, he argued, was "not an accident"; it was due to the "hard work and devotion of administrators and teachers in the school." He used this evidence to contend that it would be wise to "make as few changes as possible" in the school. Additional analysis, however, showed that a different agenda might be in order. Empirical data on standardized tests requires that one understand the nature of the test and the student population to which it is administered. This particular school was located near one of the largest private universities in the United States; the students' parents were primarily graduate or undergraduate students or professors, and the student population was predominantly white and upper-middle class. The designers of the CTBS projected the performance of eighth-grade students in this school on the tenth-grade level. Comparison of actual scores with those normally expected from this kind of student showed that *actual* scores were only a few months higher than *predicted* scores. The empirical evidence showed that this group of students was not excelling, as the principal had implied, but was merely holding its own.

A rich array of empirical data are available in both schools and school systems in rich array. These data include the numbers and kinds of students, turnover rates among teachers, the average income of parents sending their children to particular schools, and students' scores on standardized achievement tests. Scholars and administrators can use these data to draw inferences and conclusions about the schools. Empirical data provide details extending the richness and accuracy of the theorical maps used to frame problems and define dilemmas. In work design research, empirical knowledge has filled in many details in the job characteristics theory of work described above. Researchers found, for example, that social cues from supervisors and co-workers significantly alter the "objective" features of work that people describe in standardized instruments (O'Connor & Barrett, 1980). Talking about the desirability and usefulness of work makes people interpret its structural characteristics in different ways. This important new detail on the theoretical map points to the importance of deliberately paying attention to talk about new structures from salient and important sources – administrators, for instance. Empirical data from schools will provide evidence of the outcomes – reduced turnover among teachers in target populations, reduced absenteeism, increased job satisfaction, and improved student performance – affected by changes in school work structures. Empirical knowledge thus adds an important way of knowing about the impacts of administrative action and social factors in schools.

EXPERIENTIAL WAYS OF KNOWING

Experience – their own and others' – is a final source of knowledge for reflective administrators. Experiential knowledge is sometimes discounted by academics and relied on to the exclusion of other knowledge by practitioners. Experience has many advantages, such as vividness, immediacy, and relevance. Its disadvantages also are manifest; it can be unrepresentative (a fluke), simplistic, and limiting. Like the other two forms of knowledge experience must be assessed for its goodness of fit, the accuracy and richness of its detail, and its applicability to various circumstances. The scouts and guides who retraced their footsteps and led Americans West during the last century depended on experience for their own and others' safety. Yet human and natural aberrations from experience that were sometimes fatal befell many of them. So, experience is not sufficient by itself. However, the exclusion of experience can result in pallid and uninspired knowledge – a map no adventurer would choose to follow.

Both the usefulness and the limitations of experiential knowledge in reflective practice can be illustrated by examples of the phenomenon in professional practice that Donald Schön calls "selective inattending." In his work on reflective practitioners, Schön (1983, 1987) worried that over reliance on unexamined or unchallenged experience leads managers and other professionals to exclude critical information from problem analysis. This selective inattending results in naive problem definitions and in inappropriate or ineffective solutions. As the following example shows, selective inattending can be of great importance.

At one time as a principal I became involved in an escalating conflict between a mother and a team of mathematics teachers in an outcome-based mastery program. The instructional system relied on computers to score student exams and record their progress. Mastery was defined as at least 80% accuracy, and no student could progress to the next lesson before scoring 80% on the unit test. The mother insisted that her son, who had repeatedly failed a simple introductory lesson on the ordering of whole numbers, understood number order and could answer any reasonable question about the relative value of numbers put to him. The teachers – a math teacher, a special education teacher, and a classroom aide – insisted that this was obviously not the case, since even after re-teaching and further practice, he had failed the unit test five times. The mother attacked the mastery program and the integrity of the teachers. Feelings ran high, and the entire mastery program was coming under critical scrutiny from other parents as well. Not being expert in special education or mathematics instruction, I asked the special education department chairperson to look at the student's lessons, practice assignments, test responses, and test scores to see if she could help explain the apparent failure. She quickly discovered a simple pattern, verified by a quick look at records of the student's elementary school test evaluations. The student had an ordering disorder unrelated to the value of numbers. When asked to arrange five numbers from greatest to least on the multiple-choice tests used to establish mastery, he would preserve order by assigning "a" to the largest number. Proceeding down through the numbers until he assigned "e" to the smallest, he ignored the choice assignments on the response sheet and filled out – neatly and in No. 2 pencil – the boxes corresponding to his logical assessment of the descending order of whole numbers. His mother, his teachers, and I had not attended to this response pattern, and so we suffered two months of anger, frustration, and accusations.

Selective inattending can take other forms. Administrators may choose to rely on feedback from those teachers who spend time in the office – talking with the principal, joking with secretaries, or volunteering for small administrative chores – as their primary or only source of information about teacher attitudes. Over reliance on a few close informants may occur because of constraints on time, personal relationships, or simple sloth, but it results in critical gaps in information. Knowledge that might be vital to a quality administrative decision could be overlooked. The sentiments and opinions of faculty members who choose to stay away from the office (for any number of reasons) might be missed.

It is not the deliberate or premeditated filtering of information that is the critical factor in selective inattending. Rather it is the selective lack of attention paid to events and information that may be important to the quality of outcomes in a particular situation. The more familiar the experience, the greater the likelihood of selective inattending to details that contradict it.

Experiential knowledge includes personal experience and the experience of others. Personal experience provides the most vivid form of experiential knowledge, and vicarious experience provides a sampling of the vivid experiences of others. In the discussion of theoretical knowledge, I illustrated its application to educational administration with an example drawn from the job characteristics theories of work motivation. Work design also provided me with another vivid experience with selective inattending and the importance of vicarious experiential knowledge. The district in which I was a principal was implementing a career ladder for teachers. As part of my responsibilities, I served on a committee of three (the principal and two teachers) who selected career-ladder teachers. While selection required a majority vote, no teacher could be appointed without the assent of the principal. This procedure was an attempt to insure a major role for teachers in the selection of their new "leaders", while protecting the prerogative of the principal to influence the selection of powerful teachers with whom he or she could work. Part of the selection process included an interview. In the interviews in which I was involved, candidates were asked essentially the same questions, but different follow-up questions probed into skills and experiences that might be relevant to the new positions. The interviews we well, and the vote resulted in the immediate and apparently unanimo selection of three well respected teachers. But I soon learned that much mo had happened. Teachers talked about the way I "dominated" the selecti process by "asking better questions" of favored candidates and "arguing forcefully" for my apparent favorites that the committee members "did n feel free to deviate" by voicing preference for other candidates. While sever other candidates would have been absolutely acceptable to me, teachers o the committee failed to observe this. My domination of the selection proce through forceful argumentation and the press of formal authority totall escaped me. As I talked with other principals in the district, I learned th similar problems had plagued the selection process for them. Teache throughout the district complained that principals had dominated the selec tion committees through formal, and charismatic authority and forcef argumentation. In the few schools where committee members followed written, preplanned interview schedule (including probes and without dev ation) and where the principal had played a minor role in the discussion abo candidates early in the decision making process, principals escaped the accusations. If the establishment of the three-person selection committe was meant to give teachers actual control *and* a perception of control ov the process, it had not succeeded. From this, I learned about the influenti role of social cues from supervisors. I also learned from the experiences o other principals how some of them had alleviated the negative consequence of unintended influence.

The foregoing examples support a belief that knowledge in many form is available to administrators choosing to enhance their effectiveness throug reflection. The integration and application of theoretical, empirical, an experiential knowledge is critical to reflective practice if reflection is t create a rich and changing basis on which to improve school administratio Despite protestations that the knowledge base in educational administratio is nebulous (National Policy Board for Educational Administration, 1989 and despite disagreement among scholars and practitioners over which discreet, theoretical, or empirical knowledge is necessary to good scho administration, administrators do have rich sources of knowledge availabl to them -- sources applicable to their work settings, and so extensive that the are scarcely likely to exhaust them in several lifetimes. Reflective practice can be the means through which these sources of knowledge are mo frequently and consistently applied to the solution of administrative problem in schools.

REFLECTION EXPANDS THE REPERTOIRE AND QUALITY OF CHOICES AVAILABLE

Having established that theoretical, empirical, and experiential knowledge on which administrators can reflect to their benefit exists in abundance, I turn to the desirability of reflection itself in administrative practice. Can one argue that reflection-in-action (Schön, 1983) is possible and desirable in the pursuit of improved educational practice? To answer this question, consider the nature of reflective thought in effective school administration, the increasing complexity of school leadership, and the need for creative, divergent, and unexpected new solutions to school problems.

Reflective thought is a chain involving not merely a sequence of ideas but a "con-sequence" that is, a consecutive ordering in such a way that each determines the next as its proper outcome, while each outcome in turn leans back on, or refers to, its predecessors. The successive parts of reflection grow out of each other, expanding the variety of options; they do not come and go in a medley (Dewey, 1933, p. 4). The progression of thought that links and expands complex elements contributes to complexity, creativity, and surprise as ideas are sometimes followed to unexpected conclusions. The consideration of alternatives and the understanding of precedents and consequences is illustrated in the example of the mastery math instruction presented earlier. In that case, the special education chairperson was able to find an almost terrifyingly simple solution. In other cases, the quality of outcomes depends on more elegant options being discovered.

In order for actions to develop from reflection, conceptual complexity may be a necessary ingredient. Karl Weick (1978) argued that leaders who are complex, and who possess the widest possible selection of behaviors and attributes from which to choose when responding to the needs of organizations, are more likely to act appropriately and for the good of the whole. He compared administrators to a common carpenter's tool that has many short, movable, metal rods, which Weick calls "spines", suspended in a frame. The frame holds the metal spines firmly but leaves them free to slide perpendicular to the holding frame. When pressed against a door frame, molding, or other physical object, the position of the newly arranged spines creates a negative and positive replica of the physical object, a two dimensional tracing. More recently, the toy industry has provided a compelling elaboration of this tool with a toy that suspends a matrix of spines. When pressed against a face or other object, these spines create a negative and positive image in three dimensions, one on each side of the frame. The resulting images are haunting replications of the real object. The more spines in the matrix, the more accurate the image created in a three dimensional map of the actual object.

As conceived by Weick, this tool/toy can serve as an analogue for the relationships among persons, social systems, and choices necessary for the maximum impact of reflection on effective school administration. The more representative (and complex) the image, the more varied the response choices for administrators. As administrators improve their ability to survey the knowledge they accumulate (or to which they have quick access) and to apply it to administrative dilemmas, an increasingly broad repertoire of action alternatives can develop. This process itself builds, in turn, multiple and complex "spines" in the administrator, further expanding future choices available for problem definition and resolution. Building on the three ways of knowing described in the foregoing section, a reflective administrator can learn to see the world through the elaboration of his or her multiple spines. The more sources and ways of knowing, and the more skilled the reflection resulting in connections and consequences, the more varied and complex the responses available, and the greater the likelihood that these choices will be creative and appropriate.

A commitment to reflective practice thus becomes a lifetime commitment to a way of thinking and acting, and the process itself enhances the future quality of the reflective practice. The repertoire and quality of responses to accurate "reflections" of the social world of the school depend on the range of the knowledge surveyed and the complexity of the administrator responding. Administrators lacking a broad knowledge base and the reflective complexity to put that knowledge together in new ways possess a restricted and restrictive set of responses from which to choose. The more difficult, unique, or varied the dilemmas that arise, the more dysfunctional the effects of these limitations.

Knowledge about human cognition expands our understanding of the ways in which a thought/action expansion process might work, and this knowledge further supports this insight into the potential of reflective practice. Cognitive psychology elucidates, through the use of a mental advance organizer or schema, the mechanisms through which perceptions and judgments about new events are shaped. A framework for processing new information and experiences, a schema is a collection of concepts and associations that occur together repeatedly. It acts as a unitary, higher-order organizing concept (Thordyke & Hayes-Roth, 1979). Schemata help people process and transfer knowledge from one situation to another (Luiten & Ames, 1980). Psychologists find that goal relevant deviations from conventional or habitual behavior create vivid memories (Bower, Black, & Turner, 1979). Vivid memories then become a resource for future reflection and action, creating a high-quality relationship between action and memory in which thoughts that enter consciousness are charged in their relation to prior experiences (Head, 1920). Additionally, learning is facilitated, and inappropriate inference is diminished, when thought discrimination is increased. The more administrators understand their own thinking and the schemata they apply to new situations, the more imaginatively and flexibly they will function. They will be able to draw more accurate inferences, thereby applying more complex and diverse schemata to the analysis of problems. Fortunately for the present argument, increased knowledge also improves inference ability (Pearson, Hansen, & Gordon, 1979; Nickolson, & Imlack, 1981).

The importance of administrators' thoughts in shaping school organizations is highlighted by the sometimes disproportionate impact that their thinking has on the meaning attributed to events by others, and by their impact on people's subsequent actions. Organizational behavior researchers, for example, have found that the "interpretive schemes" of powerful organizational members and these members' expressions of these "provinces of meaning" shape critical world views, norms, and perceptions of people in the organization (Ranson, Hinings, & Greenwood, 1980). The person with disproportionate visibility in the school (the principal) is given disproportionate attributed potency (Nisbett & Ross, 1980). Thus, the schemata administrators apply to problem definition and resolution often determine which factors will be considered salient and which will be ignored, perhaps directing attention to a limited portion of the available knowledge (Tesser, 1978). Exploring the "mind environment" relationship, researchers provide still more reasons why school leaders should be skilled and reflective thinkers (Bougon, Weick, & Binkhorst, 1977).

THE INTEGRATION OF THOUGHT AND ACTION THROUGH REFLECTION

In the preceding discussion, I have argued that there is something to think about and that reflection expands the repertoire and quality of choices available. The integration of knowledge and action through reflection is the necessary final step for reflection to provide the key to more effective administration in the future. One way to understand this unification of knowledge and action is as a language based experience. Strong research evidence supports the idea that language-based, conceptual views of reflection related to successful professional practice are useful in environments of complexity, uncertainty, and instability, such as schools. Language-based models of reflection can illuminate the processes of a high-quality transition from knowledge to action. Because of the role of fact and imagination, language simulates the world it symbolizes. Reflective administrators then look back and, through reflection, synthesize what they know for future use (Hills & Gibson, 1988). The education and management literatures are filled with examples of the impact of language on schools. Vision, mission, and organizational culture are acknowledged means for focusing the convictions and efforts of groups of people toward the accomplishment of common goals.

A language-based view of reflection relates the process closely to the research literature on knowledge and thought. The language-based symbolic world on which administrators reflect then provides new knowledge and an arena in which to test current knowledge. If administrators avoid inappropriate inferences, new information either confirms or requires the modification of an existing schema. Reflection thus begins to operate routinely to prevent selective inattending. More effective and reflective administrators can use their expanded knowledge base, their multiple spines, in conscious reference to their schema as they define and redefine dilemmas and scan their own repertoires and the environment for action alternatives. This is particularly important for intransigent problems and for surprises. As Schön pointed out, "When the phenomenon at hand eludes the ordinary categories of knowledge-in-practice, presenting itself as unique or unstable, the practitioner may surface and criticize his initial understanding of the phenomenon, construct a new description of it, and test the new description by an on-the-spot experiment" (1983, pp. 62-63). What Schön calls knowing-in-action may be "different kinds of internal representations," reflection on the word-symbols and language with which we define what we know (Hills & Gibson, p. 9). Language becomes a reflection of the images one holds, as well as a tool. It also makes possible the deliberate application of reflection during pre- and inservice training for improving school administration.

This model of reflection is perhaps best illustrated by the power of names in human relationships and history. Racial, ethnic, and sexual stereotyping draw power from the labels that clarify and reinforce them. Linguists describe the social and psychological power of words as symbols for human traits. If I say "Sugar and spice and everything nice," I'll bet you won't think of boys.

When this reflective process is conscious, the quality of administrators' interactions with schools is enhanced, helping them avoid what Nisbett and Ross (1980) call the "fundamental attributional error." Administrators, order to define and solve problems in increasingly complex school organizations, must avoid the simplistic overapplication of marginally useful schemata to new situations – poor-quality inference leading to poor quality actions. Streams of consciousness and undisciplined thoughts lead nowhere; Dewey (1933, p. 4) calls this process what's "going through the mind" and argues that what "goes" in this fashion rarely leaves much that is worth while behind. Decisive yet inappropriate decisions are similarly undesirable. Reflective practice is a deliberate effort to improve the quality of results by influencing the method of problem defining and resolution. In this way, knowledge, thought, and act are integrated. This is what I believe Schon means when he describes thinking in action. For school administrators, this last step is crucial. Until knowledge and thought become actions and all three then are subjected to continuous examination through repetitions of this same process, the administrator is not a reflective practitioner.

CONCLUSION

Reflective practice can be a key to effective administration. By developing the habits of reflective practice, administrators can improve the quality of their choices and the range and scope of knowledge applied to the improvement of schools. The reflective practitioner is someone in whose mind multiple sources of knowledge and multiple ways of knowing are made to interact, shaping action congruent with what the administrator knows and seeks to accomplish. Reflective practitioners must be attentive to patterns in their organizations, be skilled at describing what they observe, be inclined to put forward bold and sometimes radically simplified models of experience, and be ingenious in devising tests of these new models compatible with the constraints of an action setting. Reflective practitioners explore their own leadership, and reflect, often in a setting hostile to reflection, on ways they frame their actions. They observe and explain how other administrators and teachers behave in school social systems, imagine and experiment with interventions aimed at increasing their freedom to use new approaches to learning and teaching in schools, adapt to or cope with the life of the school as a component of their practice, elaborate on the experiences of others, and apply known principles of management and relevant knowledge from other sources to their work. Reflective practitioners also must be able to make sense of situations where no principles known to them appear to be involved. In the tradition of the ancient dilemma posed when one does not know what one does not know, they must inquire, framing experiments to be tri[illegible] in the messiness of the action setting. Reflection thus becomes a strategy of inquiry as well as action. It provides a mechanism for testing whether a problem can be solved within actual constraints, and provides an openness to unexpected back talk that suggests how the problem may need to be reframed.

The dilemmas framed by reflective practitioners as a result of their interpretations, the problems they identify, and the actions they take are intertwined threads of the same fabric. By recognizing and using the unity of thought, purpose, and action, reflective administrators can intervene in their own cycle of thoughts to shape actions that promote effective administration and enhance the welfare of pupils and teachers in schools. The usefulness of reflective practice lies not in its inherent value in the present, but in its effect on the future. This usefulness depends on an acceptance of the legitimacy of the unpleasant and uncomfortable as well as the pleasant and comfortable — on face value and without alibi. Those who use reflective practice in schools may eventually make positive and lasting changes, in response to a world they envision, rather than the world as it is.

NOTES

1. The author thanks Roland Barth, Harvard University, for first bringing this very important question to my attention.

2. Special thanks are to Phillip Morrison, host of "The Ring of Truth," presented on television's Public Broadcasting System for this metaphor.

REFERENCES

Biddle, B. J. (1979). *Role theory: Expectations, identities, and behaviors.* New York: Academic Press.

Bougon, M., Weick, K., & Binkhorst, D. (1977). Cognition in organizations: An analysis of the Utrecht Jazz Orchestra. *Administrative Science Quarterly, 22,* 606-631.

Bower, G. H., Black, J. B., and Turner, T. J. (1979). Scripts in memory for text. *Cognitive Psychology, 11,* 177-220.

Campbell, R. F., Fleming, M., Newell, L. J., & Bennion, J. W. (1987). *A history of thought and practice in educational administration.* New York: Teachers College Press.

Dewey, J. (1933). *How we think.* Chicago: Henry Regnery.

Garrison, J. W. (1986). Principles of post-positivistic philosophy of science. *Educational Researcher, 15,* 12-18.

Hackman, J. R., & Oldham, G. R. (1980). *Work redesign.* Reading, MA: Addison-Wesley.

BEST COPY A

Hart, A. W. (in press). Work redesign: A review of literature for education reform. In S. B. Bacharach (Ed.), *Advances in research in school management*. Greenwich, CT: JAI.

Head, H. (1920). *Studies in neurology*. New York: Oxford University Press.

Hills, J., & Gibson, C. (1988). *Reflections on Schön's, "The Reflective Practitioner."* Unpublished manuscript.

Kmetz, J. T., & Willower, D. J. (1982). Elementary school principals' work behavior. *Educational Administration Quarterly, 18*, 62-78.

Luiten, J., Ames, W. S., & Ackerson, G. (1980). A meta-analysis of the effects of advance organizers on learning and retention. *American Educational Research Journal, 17*, 211-218.

Martin, W. J., & Willower, D. J. (1981). The managerial behavior of high school principals. *Educational Administration Quarterly, 17*, 69-90.

Mintzberg, H. (1973). *The nature of managerial work*. New York: Harper & Row.

National Policy Board for Educational Administration. (1989). *Improving the preparation of school administrators: An agenda for reform*. Charlottesville, VA: Author.

Nicholson, T., & Imlach, R. (1981). Where do their answers come from? A study of the inferences which children make when answering questions about narrative stories. *Journal of Reading Behavior, 13*, 111-129.

Nisbett, R., & Ross, L. (1980). *Human inferences: Strategies and shortcomings of social judgment*. New York: Prentice Hall.

O'Connor, E. J., & Barrett, G. V. (1980). Informational cues and individual differences as determinants of subjective perceptions of task enrichment. *Academy of Management Journal, 22*, 697-716.

Pearson, P. D., Hansen, J., & Gordon, C. (1979). The effect of background knowledge on young children's comprehension of explicit and implicit information. *Journal of Reading Behavior, 11*, 201-209.

Ranson, S., Hinings, B., & Greenwood, R. (1980). The structuring of organization structures. *Administrative Science Quarterly, 25*, 1-17.

Schön, D. (1983). *The reflective practitioner: How professionals think in action*. New York: Basic Books.

Schön, D. (1987). *Educating the reflective practitioner*. San Francisco: Jossey-Bass.

Tesser, A. (1978). Self-generated attitude change. In L. Berkowitz (Ed.), *Advances in experimental social psychology*, Vol. 11. New York: Academic Press.

Thorndyke, P. W., & Hayes-Roth, B. (1979). The use of schemata in the acquisition and transfer of knowledge. *Cognitive Psychology, 11*, 82-106.

Weick, K. (1978). The spines of leadership. In M. W. McCall, Jr. & M. M. Lombardo (Eds.), *Leadership: Where else can we go?* (pp. 36-61). Durham, NC: Duke University Press.

AVAILABLE

Reprinted with permission from ERIC Clearinghouse on Educational Management.

THE EVOLUTION OF A REFLECTIVE COACHING PROGRAM: SCHOOL-UNIVERSITY COLLABORATION FOR PROFESSIONAL DEVELOPMENT

Introduction

In an important, recent article Sparks and Loucks-Horsley (1989) identified the need for increased knowledge of ways that staff development "contributes to teacher professionalism and teacher leadership" (p. 55). The following article describes the design and implementation of a reflective coaching program that was intended to improve the professional work culture of a district that had been characterized by collective bargaining disputes and strikes. Participant evaluations of the program's initial year are described, along with recommendations for districts that are considering the implementation of a peer coaching program.

Program Design

The original impetus for this program arose from teacher and administrator concern over pervasive morale problems that were both cause and effect of a series of collective bargaining disputes and bitter strikes. This semi-rural, county-wide district of 500 teachers formed a staff development committee of teachers and administrators which spent a year visiting and studying a variety of ongoing staff development programs.

Near the end of the year of visitations and study, the committee issued a request for proposals from regional universities and staff development consultants for a program that would incorporate both content workshops focused on current research and theory on teaching and learning and follow-up coaching. Peer coaching programs that the committee had observed and favored utilized some form of technical coaching, a model of coaching whereby the peer coach provides feedback on the degree of teacher implementation of prescribed teaching techniques (Garmston, 1987; Williamson & Russell, 1990).

The initial group of participants in the program were to include twenty-five teachers and five administrators. Half of the participants would be drawn from the staff development committee, all of whom wished to participate. The remaining half of the group would come from volunteers. All teachers participants were experienced elementary and secondary teacher veterans whose teaching experience ranged from six to twenty-seven years. Administrator participants included two principals, two assistant principals, and one central office supervisor.

In contrast to the technical coaching model in which the committee was originally interested, the authors proposed a reflective coaching program that was built around two guiding principles:

1. An underlying principle of the reflective coaching program emphasized the role of the teacher as the key instructional decision-maker for his or her classroom. The program would promote self-direction and self-reflection on curriculum and instructional decisions and behavior, rather than focus on techniques prescribed by other educators. Hargreaves and Dawe (cited in Fullan, 1990,

pp. 15-16) capture the distinction between the reflective and technical models quite eloquently. They describe reflective coaching as a "tool of teacher empowerment and professional enhancement, bringing colleagues and their expertise together to generate critical yet also practically-grounded reflection on what they do as a basis for wiser, more skilled action." In contrast, technical coaching emphasizes the role of the teacher as technician along with "smooth and uncritical adoption of preferred forms of action (new teaching styles) introduced and imposed by experts from elsewhere."

2. The guiding principle for the teacher-coach relationship would be reflective self-analysis whereby the coach serves as a second pair of eyes and ears in the classroom to collect teacher-selected data and engage with the teacher in ongoing dialogue about the interpretations and implications of classroom data. Rather than providing positive or negative feedback and evaluation as in the technical model, the reflective coach's role would be to support and foster the teacher's self-analysis and reflection as objectively and non-judgmentally as possible.

Current theory and research on teaching and learning would be presented in 10 workshops spaced throughout the academic year. Five additional workshop days would be used for training in reflective peer coaching which applies the principles and strategies of clinical supervision (Cogan, 1973; Goldhammer, 1969) to peer observation and coaching and emphasizes teacher self-reflection and direction.

1. The 10 content workshops would address a variety of teaching models and research-based knowledge about teaching and learning, some of which had been identified in the request for proposals while others were suggested by the authors. Content workshops were proposed to include such topics as information processing theory, teacher expectations, explicit teaching, thinking skills instruction, cooperative learning, and learning styles. The purpose of these workshops would be to provide basic knowledge and skills on a particular topic; further inquiry and experimentation with a particular topic would depend upon the professional judgment of the individual teacher with the facilitation and support of the reflective coach.

2. The reflective coaching workshops were to be utilized to provide knowledge and practice in not only data collection but also in active listening, non-judgmental ways of discussing observation data, and pre- and post-conference skills. Data collection techniques to be studied would include such techniques as verbal flow, seating chart techniques, selective verbatim, scripting, formal instruments such as Flanders Interaction Analysis System, as well as ways of developing data collection techniques that were responsive to specific teacher concerns.

Ten doctoral students, all of whom were experienced classroom teachers, would serve as peer coaches during the program's first year. The doctoral students were preparing for careers in public and higher education in curriculum and supervision and had all been previously grounded in systematic observation and clinical supervision. As the initial group of district participants would include 25 teachers and five administrators, each doctoral student would coach three participants. At least 10 classroom observations, including pre- and post-conferences, would be completed for each district participant.

Following lengthy review of the reflective coaching proposal, along with consideration of numerous other technical coaching models that were proposed, the committee was attracted to reflective coaching's emphasis on the classroom teacher as the key instructional decision-maker in the classroom. Members recognized the potential for reflective coaching to affect positively professional esteem and efficacy.

A three-month-long period of negotiations and dialogue ensued during which the committee and authors collaboratively planned the first year. It was agreed upon that approximately two content workshop days would be devoted to cooperative planning of the program's second year when first-year participants would serve as peer coaches themselves.

Implementation

The first workshop was held in September and was followed by the initial day of classroom observations which provided opportunity for teachers and coaches to become acquainted and to introduce students to a visitor who would return repeatedly to their classroom. Initial pre- and post-conferences focused upon the teacher's espoused teaching platform as the teacher and coach explored the beliefs, understandings, and commitments which framed the teacher's work.

As the program unfolded, some teachers experienced frustration with their coaches' unwillingness to provide evaluative feedback during post-conferences. Familiar with the technical model of peer coaching, these teachers preferred specific feedback focused on their implementation of desired teaching behaviors. As per the previously-stated principle of non-evaluative and reflective coaching, however, the doctoral students consistently sought out the teachers' perceptions and reactions based upon data collected during observations. Those data included such teacher-selected foci as wait time one and two, student-teacher verbal interactions, teacher use of higher- and lower-level questions, and other low-inference classroom data.

In January, a mid-year evaluation was completed which indicated that early teacher frustration with the emphasis on reflective rather than technical coaching had begun to wane. Participants also expressed their desire for more information on the reflective coaching process as they looked ahead to the second year of the program when they would assume responsibility for coaching colleagues who would be entering the program for the first time.

During the second half of the year, workshops focused on the coaching process itself and provided both knowledge and practice in effective ways for gathering classroom data. Additionally, with the support of the authors, first-year participants designed the program's second year which would introduce 50 of their colleagues to the program under the leadership of the district's first Coordinator of Staff

Development. The coordinator was selected from a pool of five of the first-year teacher-participants who applied for the position in April.

First-year Outcomes

Evaluation of the program's first year was based upon participant self-reports as well as classroom data collected by peer coaches. Outcomes are described in relation to five areas.

1. Changes in thinking about teaching

One of the major purposes of this reflective coaching program was to encourage teachers to become more inquiring and thoughtful about what they do in the classroom and why. The most commonly reported change in teacher thinking was that teachers were thinking more about their teaching behavior and their students' learning:

> The greatest change in my thinking about teaching is just that. I think about how and why and what I teach. I reflect on each lesson I teach and make mental and physical notes on it. I think about what I did well, what wasn't so good, and how I can improve on it. (Teacher H)
>
> Dare I use the word reflective! I shall! I definitely have become a more "consciously aware" teacher. The day-to-day decisions that I make in the classroom are more deliberate and thoughtful. (Teacher O)
>
> My thinking has shifted from concerns of content--to which is the best model to use to teach a given concept

> to the particular group of children I have. (Teacher T)

Teachers also stated that they more carefully planned and evaluated the outcomes of their teaching both during and following a lesson. As these teachers' locus of control became increasingly internalized, their sense of efficacy in focusing on their intentions in the classroom blossomed. Repeatedly, teachers described themselves as more reflective and more intentional in their planning and self-analysis. In other cases, teachers reported no change of focus in their thinking about teaching, yet did indicate improvement:

> My thinking about teaching has not really changed. I still feel my task is to teach students how to question and how to organize their thoughts. If anything, my approach to how I accomplish this task has changed. I've gained new insights as to how to develop questions and how to be more attuned to student thought processes in order to get them to think and question. (Teacher G)

2. Changes in teaching behavior

Teachers reported numerous examples of changes in their teaching behavior which were also supported by classroom data collected during observations. As explained above, the following examples reflect teacher-selected emphases for observation and improvement:

> I have increased my wait time, and my movement within the classroom. I have actually structured some cooperative learning situations, which have proven very worthwhile. My lessons are beginning to show more

> concern for thinking skills. (Teacher A)
>
> I have spent more time in walking around the room to check students when they are doing written work, and I am constantly using the various techniques we have discussed to provide feedback very often. (Teacher D)
>
> I am not tied so tightly to the lesson plans--if I discover a "hole" in their understanding. I try to fill it even if it means my "Wednesday lesson" is put off until Friday. I also am doing more of what I regard as experimentation: I'll alter sequences of activities and lessons to try to discover a way to teach a concept with more clarity for the students. (Teacher E)

Not only did Teacher E experiment with new ideas and approaches in her classroom, she also reported that she learned about her teaching from her students:

> I have learned many, many things from my students by asking them to write about artwork, the art concepts, the art processes, and their feelings as they work on their projects. My behavior has changed because I took the time to try a different way and step back to observe the results. (Teacher E)

Other teachers reported similar parallels between changes in their own behavior and thinking and their students'. Not only did teachers think more often and more deeply themselves, they expected the same of their students.

> I try to include several higher level questions in my discussions with my students--asking them to compare and contrast or analyze a situation--to get them used to using thinking skills not just memory. (Teacher L)

Additionally, teachers reported that as they gained confidence in their ability to learn and apply new knowledge and skills, their professional esteem blossomed.

> I notice things such as whether I have called on everyone every period. I try to sample all the children's knowledge instead of just plodding through and hoping that everyone understood it the way I presented it. I am also more aware than ever of the mistakes I make but now instead of kicking myself over them, I realize my mistake and take definite steps to change that behavior or practice. (Teacher N)

3. Benefits to students

As explained above, the major initial purpose of this program was to improve the professional culture of this faculty by modeling and encouraging inquiry into teaching and stimulating more disciplined reflection on the teacher's behavior in the classroom. As the program continues now in its second year, one test of its effectiveness will be the commitment and willingness of participants to observe and evaluate carefully and systematically student cognitive and affective learning. At the end of the first year, participant self-reports of benefits to students included such observations as the following:

> My students have a more energetic and enthusiastic teacher who is doing the best teaching job he has ever done. The enthusiasm I got from the program has spilled over into my classroom. (Teacher K)

Several other teachers echoed the benefits of their enthusiasm for their students:

> They're getting a better teacher. Somebody who is willing to learn and willing to make changes. A person who has their education as a number one priority. Students don't need a dull, stagnant teacher who is counting the years until he can retire. (Teacher P)
>
> I decided early in the year to include them by telling them what I had learned after each meeting or coaching experience. I felt that I provided a role model for encouraging them to learn how to be a better student and that all people need to continue their education. (Teacher S)

4. Benefits to district

Many participants cited benefits identified above as positive outcomes for the district. Others referred to the low professional morale that had characterized the district for some time and identified this program as an important step in improving the teaching and learning culture.

> I see an opportunity for them to finally provide meaningful inservice training and thereby gain the support of the staff in this project. I think it will raise teachers' self-esteem and that perhaps will

> go a long way toward changing the pervasive negativism that we have experienced in [district name] for many years. (Teacher L)
>
> The district has benefitted by helping to provide an excellent environment in which its teachers are able to grow. (Teacher H)

Others were more personally focused in the benefits they saw for the district:

> The district now has an older teacher that has a renewed interest and drive to improve himself and the district as a whole. I will be able to pass this renewal on to other professionals within the district. (Teacher A)

One of the more memorable observations of the year came from a participant who viewed the experience with mixed feelings:

> I find that this year has totally exhausted me, and each day when I go home, I am more tired than I have ever been before in teaching. However, the difference is that I know I'm doing the best job I can and that is largely due to the reflective process which we underwent in this program. (Teacher D)

5. Comparison with other inservice programs

Participants cited continuity and follow-up, emphasis on practice, teacher involvement and control, and mutual respect as significant qualities which highlighted their experiences in the reflective coaching program:

> This program has been like no other inservice I have attended. I was an active participant instead of a head that was talked at. This program confirms my belief that successful inservice requires the active participation of the professional staff. (Teacher A)
>
> Other programs bombard us with theory, but offer no opportunity for practice or for feedback. All inservice programs should be geared to teacher needs. (Teacher B)
>
> I have never participated in a valuable inservice before. Our programs have always lacked any thread of continuity. (Teacher F)
>
> This program has had teacher input from the start which I feel good about. Our thoughts and concerns have always been listened to in all the decisions that had to be made. (Teacher I)
>
> I felt a freedom to express feelings, questions, concerns, ideas, and a mutual comradeship. (Teacher R)

As these teachers' comments attest, participants felt a shared ownership in the reflective coaching process that they had not previously experienced. As their sense of ownership grew, motivation and excitement about teaching correspondingly increased. The following teacher's evaluation of the experience eloquently speaks to new-found enthusiasm for professional learning. Comparing the reflective coaching program to previous inservice, this participant wrote:

> They were one-day experiences. We were given some information. There was never any way to question how it could be adapted K-12. We could never try it and then discuss it with someone as we have with our peer coach. Programs did not provide for the different personality styles of teachers. Programs did not provide for the fact that everyone cannot adapt a concept to their teaching style, or to their classroom of children, or to their subject matter just because it works well for the speaker. We were usually treated as people without knowledge, or without common sense. We were just a room full of people to spend their appointed time with. The [reflective coaching] program provided information, stategies, practice, companionship in the classroom, reflection and personal choices of what suited me, my personality, my philosophy of education, and most important, the little ones in my classroom. (Teacher T)

Not only did this teacher express enthusiasm for the reflective coaching process, she described a new level of professional confidence and esteem:

> As a result of this program, I would help to try to change inservice days into programs where teachers have an opportunity to talk and learn from each other. I'd urge others to reflect enough to separate what they think is correct in education from what textbook writers, government departments, school boards, parents

and administrators have forced them to think is right. (Teacher T)

Recommendations

As the above self-evaluations attest, first-year participants in this program discovered new levels of professional commitment to teaching and ongoing learning. All of them willingly volunteered to continue their participation in their new role of peer coach during the program's second year. Based upon their evaluations, we offer the following recommendations to districts that wish to develop a peer coaching program that is focused on improving the professional teaching culture.

1. Invite teacher input and ownership from the very beginning of a new program. These teachers indicated that teacher involvement from the "ground up" in program design and implementation was crucial to their commitment and sense of ownership of the program.

2. While commitment to collaboratively-developed program goals is important, it is also essential to respond to areas of conflict and confusion openly and immediately. The mid-year evaluations indicated a need for focused attention to reflective coaching knowledge and skills. This need was addressed earlier than had been originally planned. When early tensions over technical versus reflective coaching surfaced, they were also dealt with openly by the entire group. We believe this openness contributed to teacher perceptions of an atmosphere of honesty and trust.

Additionally, when one is attempting to introduce a complex innovation into a school, one should expect, indeed hope for, early problems in implementation. When complex innovations experience smooth implementation in the early stages, it is generally not a sign that things are going well. Rather, it is likely a sign that the innovation has been "watered down" for smooth implementation. This "watering down" actually will tend to reduce the potential benefits of the innovation (Fullan, 1990).

3. The reflective coaching model emphasizes teacher latitude in determining the focus of observations. The need for teacher latitude and ownership cannot be overstressed. Teachers repeatedly noted the sense of professional esteem they derived from this emphasis. As noted above, they relished the opportunity to inquire into, and experiment with, their teaching.

4. While teachers valued the emphasis on reflection, they also stressed the need for ongoing attention to practical skill development. They found their reflective coach invaluable in supporting their self-selected foci for expanding their teaching repertoire.

5. If a district is considering including administrators in the peer coaching program, it is essential to recognize the special challenges building principals face in attempting to teach regularly. The four principals included in this group found it nearly impossible to teach regularly because of administrative responsibilities.

Special attention needs to be given to ways of freeing up principals so they can actively participate.

Conclusion

As Duke (1990) has noted, staff and professional development may be distinguished from one another by professional development's emphasis on individual freedom, uniqueness, judgment, and virtuosity. In contrast staff development is oriented to group goals which spur collective growth towards the achievement of those goals. In keeping with the norms of development programs that are successful in fostering collegiality along with personal self-actualization (Shroyer, 1990), the reflective coaching process described above sought to integrate the best of both models of ongoing learning by improving the professional culture of a faculty by fostering increased levels of inquiry, experimentation, and reflection. As the teachers' own words attest, the program's first year was successful in enhancing the professional esteem and motivation of a group of veteran teachers. We suggest that districts with similar concerns about professional morale give serious consideration of reflective coaching.

References

Anastos, J. & Ancowitz, R. (1987). A teacher-directed peer coaching project. *Educational Leadership*, *45* (3), 40-42.

Cogan, M. L. (1973). *Clinical supervision*. Boston: Houghton Mifflin, Inc.

Duke, D. L. (1990). Setting goals for professional development. *Educational Leadership*, *47*, (8), 71-75.

Fullan, M. G. (1990). Staff development, innovation, and institutional development. In B. Joyce (Ed.), *Changing school culture through staff development: The 1990 ASCD yearbook* (pp. 3-25). Alexandria, VA: Association for Supervision and Curriculum Development.

Garmston, R. J. (1987). How administrators support peer coaching. *Educational Leadership*, *44* (5), 18-26.

Goldhammer, R. (1969). *Clinical supervision: Special methods for the supervision of teachers*. New York: Holt, Rinehart, and Winston.

Shroyer, M. G. (1990). Effective staff development for organization development. *The Journal of Staff Development*, *11* (1), 2-6.

Sparks, D., & Loucks-Horsley, S. (1989). Five models of staff development for teachers. *The Journal of Staff Development*, *10* (4), 40-57.

Williamson, L. S., & Russell, D. S. (1990). Peer coaching as a follow-up to training. *The Journal of Staff Development*, *11* (2), 2-4.

BEST COPY AVAILABLE

CH_SP032718

PDAT_6Jul90

LEVEL_1

AUTH_Hillkirk, Keith; Nolan, James F.

TITLE_The Evolution of a Reflective Coaching Program: School-University Collaboration for Professional Development.

PUBTYPE_141

GEO_U.S.; Ohio

DESC_*College School Cooperation; *Program Development; *Peer Teaching; *Change Strategies; *Program Evaluation; Inservice Teacher Education; Academic Achievement; Elementary Secondary Education

IDEN_*Reflective Teaching

ABST_A description is given of a reflective coaching program designed to improve the professional work culture of a district that had morale problems because of labor disputes and strikes. An underlying principle of the reflective coaching program emphasized the role of the teachers as the key instructional decision makers for the classroom. The guiding principle for the teacher-coach relationship was reflective self-analysis whereby the coach engaged with the teacher in ongoing dialogue about the interpretations and implications of classroom data. The coach's role was supportive, fostering the teacher''s self-analysis and reflection objectively and non-judgmentally. Ten doctoral students, all experienced classroom teachers, served as peer coaches during the program's first year. Evaluation of the first year was based upon participant self-reports as well as classroom data collected by peer coaches. Outcomes are described in relation to five areas: (1) changes in thinking about teaching; (2) changes in teaching behavior; (3) benefits to students; (4) benefits to district; and (5) comparison with other inservice programs. Recommendations are made for districts that are considering the implementation of a peer coaching program. (JDO

Reprinted with permission from the Middle School Journal, November 1986.

MIDDLE SCHOOL
Journal

Collaborative Action Research and Staff Development in the Middle School

GERALD PINE

Over the past fifteen years a great deal of research about teaching, learning, and educational change has been conducted. At the same time the concern that research is seldom used by teachers has been expressed. The results of research seem not to find their way into practice for several reasons (Graham, 1979); Goodlad, 1970; McKenna, 1978):

1. Teachers judge much of the research to be lacking in practicality and to be inconsistent with classroom realities. Research topics are traditionally identified by members of the research establishment and not by classroom teachers.
2. In the quest to imitate the physical sciences questions and problems have been designed to fit the research design rather than asking the right questions and then deciding on methodologies. As a result of the research design driving the questions the research product has been too narrow and limited in application.
3. Teacher education programs have not prepared teachers to function as inquirers about their own classrooms. While pre-service teachers may have been exposed to some study of research it is often an isolated event. And no matter how much knowledge is generated by researchers, the practices and expectations of teacher educators largely determine the degree to which prospective teachers come to value and apply research. What teachers learn or don't learn about research is far more a product of the scholarly ethos in their preparation program than the result of formal instruction.
4. Teachers have not been involved as partners in designing and implementing research studies.

However, this last condition has not always been the case. Fifty years ago educational researchers and teachers frequently collaborated at all levels of the research enterprise. Many of the educational researchers of the 20's and 30's were classroom teachers working with school administrators (Chall, 1975). Studies in that progressive era were conducted on practical concerns of teachers and schools. The collaboration between researchers and practitioners went even further with joint authorship of journal articles, research monographs, and books. Furthermore, they were meant to be and were read by practicing classroom teachers. Goodlad and his associates (1970) suggest that innovations in schools do not generally come about from the usual dissemination of research findings but cor[illegible] only when teachers and administ[illegible] seek to find solutions to their own problems. They recommend that research should start with the teachers and administrators in a school and not with university based researchers.

The school is the best laboratory for research. Jackson (1968) says that the classroom teacher typically engages in as many as 1,000 interpersonal exchanges during the course of a six-hour day, frequently averaging 200-300 interpersonal transactions per hour. This observation in itself testifies to the complexity and immediacy of the daily situation in which every teacher is forced to make decisions. A single school is a research goldmine filled with important questions, rich data, and numbers of potential researchers.

Research conducted by teachers constitutes effective staff development. Staff development, currently in a heyday, should include research in addition to credit courses, workshops, and institutes. The activities that occur when teachers initiate research to solve real problems in their schools and classrooms result in real learning and growth.

Collaborative action research involves teachers in the identification of problems, the formulation and collection of data, the interpretation of information, and the application of findings. It answers the question of who has the right to create professional knowledge by arguing that teachers, the expected beneficiaries of research, should design and carry out their own research in collaboration with peers, supervisors, or university faculty. Three assumptions underlie this approach: 1) parity in decision-making among university faculty, trainers/developers, and teachers; 2) respect for the unique perspective of each constituency; and 3) equal assumption of responsibility among each participant in the collaborative research and theory development process (Mergendoller, 1979).

The collaborative action research process can be of immediate and direct benefit to a school. The school can gain not only from the *results* of research but from the *process* itself. This means, for example, that as a result of participating in the research process educators will be more able to articulate problems themselves and to initiate processes to find solutions. The fundamental principle of collaborative action research and its point of most radical departure from orthodox research is that the research process is based on a system of discussion, investigation, and analysis in which teachers are as much a part of the process as university researchers.

McKenna (1978) observes that teaching becomes most meaningful and productive when teachers regularly and systematically ask themselves why they do what they do and extend that inquiry to assessing the outcomes of the "what." All too often, if and when teachers do these things, they do them solo — behind closed doors with a classroom full of students to be concerned about at the same time they ask and attempt to answer the profound questions of "Why?", "What?", and "To what ends?" There is great promise in the pursuit of inquiry with the collaboration and support of others who have much to contribute to the solution of classroom problems and to the evaluation of the success of instructional practice — particularly researchers and university faculty. The idea of such collaborative efforts was discussed by Schaefer (1967) in *The School as a Center of Inquiry*, and was demonstrated in the 1940's by Stephen Corey and others at Teachers College, Columbia University in action research projects with brought together teachers and professors primarily for curriculum development purposes.

Teacher oriented inquiry and the view of the school and the classroom as places where research action is found will come about when researchers and teachers change their attitudes and perceptions about inquiry and research.

Certain conditions need to be built into the working environment if teachers are going to function in researcher partnerships. These are:

1) Time needs to be made available as part of the regular teaching load for discussion, reflection, investigation, and speculation.
2) an atmosphere is required in which teachers have the freedom to identify and initiate their own problems for inquiry, to express their ideas and develop hypotheses, and to share and defend their ideas with colleagues.
3) Technical assistance and support services to help teachers learn field based research processes need to be provided.
4) Reasonable material support for carrying out research and adapting research findings should be available.
5) University credit or inservice credit should be available to teachers who conduct research.
6) Alternative methodologies for conducting school-based research need to be encouraged and taught. (Mehan and Wood, 1975; Carini, 1975, Wise, 1977).

The straight-jacket of experimental design needs to be cast off and the view that good research can be conducted in many different ways established. Good research requires common sense. With some training in participatory observational techniques, case study approaches, the use of audio/video taping systems, personal journals, record keeping, and documentation techniques, teachers in partnership with university faculty can bring about a renaissance of school based research which characterized the Progressive Era in education and contributed major ideas and practices to the education of children.

Collaborative action research is substantial professional inquiry and scholarship in its scope, its epistemology, and its outcome. Teachers with this skill are no longer dependent on others for professional progress. The teacher's own professional growth and competence is enhanced. Not only are teachers likely to feel professionally alive, they may also feel effective — in that they can do something about their profession.

> “ *Action research is a powerful form of staff development and school improvement. It deserves wider use.*

The intellectual and professional process of producing new knowledge about problems in teaching, curriculum, and school change is the *raison d'etre* of collaborative action research. The issue here is that of tension between *means* (curriculum development, or educational change) and an *end* i.e., knowledge from and for practice and the training of people able to inquire professionally in this way about a wide range of issues in education. Producing knowledge from practice results from an alternating cycle of reflection and action, hard thinking, careful practice and evaluation designed to generate a more comprehensive understanding of educational problems and their possible solutions.

The integration of research and service through collabortive action research can help our schools become centers of inquiry where such fundamental issues of what is to be taught, how, by whom, where and with what outcomes for students can be pursued systematically.

ACTION RESEARCH IN ACTION

The effectiveness of collaborative action research in improving education and as a staff development process has been demonstrated by a number of middle school teachers who, in collaboration with university faculty, have conducted studies to address curriculum, instructional, and learning problems (Pine, 1979, 1980). For example, a great deal of attention has focused on student competency testing throughout the country. What is competency testing? Who determines what competencies students must master? How are they measured? Who designs competency tests? How are they used to help children? John and Marian, middle school mathematics teachers, were concerned about these questions and translated their concerns into a comprehensive, ongoing research study involving the use of computers and a humanistic approach to working with students. Both of these teachers, while taking a graduate course on tests an measurements, decided to do something about competency testing so that each individual student would be the beneficiary of testing. Their study generated data which will help individual students in the mathematics program and improve tests so that they can be used as tools to help students rather than just label them.

Inappropriate student behavior is a concern for many classroom teachers but especially for Lorna who was responsible for providing instruction for special needs students. Lorna was interested in studying ways to help students develop more positive classroom behavior. With her colleagues, she developed an approach using a combination of learning reinforcements and individualized instruction to change the inappropriate behavior of one of her students. She wrote a case study which provides rich detail identifying the various factors that influence behavior and indicates how these factors can be dealt with in changing behavior. Her case study yields useful observations for all those interested in helping special needs youngsters rea their potential.

Bob, an eighth grade mathematics teacher, studied the question of how teaching and learning styles can be appropriately matched to improve instruction. Through computerized library-searches and extensive reading, he conducted a comprehensive review of all the literature dealing with teaching and learning styles. He then generated a process which enables teachers to analyze teacing and learning styles and to match the teaching style most appropriate for each individual student's learning style. His review of the literature proved to be a great practical value and demonstrates that synthesizing and adapting previous research can be very useful for the classroom teacher who wants to reach each student.

Sandra, an English teacher, is very much interested in improving instruction in writing. She studied the professional literature to determine the most valid approach for assessing a student's writing and the most effective ways of teaching writing. She conducted a study on students' perceptions of what constitutes good writing. Her study focused on student interests and perceptions and how these could be best assessed and used in generating writing skills.

Lois has long been interested in an individualized and independent learning approach to home economics. She developed a large number of independent learning packages which she is using and revising in the home economics curriculum. Her study focused on what she learned in developing her unique approach and how her findings could be used by other home economics teachers. She conducted a study on reading levels of home economics instructional materials, developed a collection of recipes which appeal to junior high school age students, and designed a thorough, systematic, and carefully thought out approach for promoting independent learning in home economics.

How do you evaluate the teaching performance of an instructor who has implemented an individualized and open approach to education? Concerned about this question, Peter designed an evaluation system which incorporated student evaluation, self-evaluation, and supervisor evaluation of the teacher using an individualized approach to instruction. He tested this system and evaluated it collecting data from students, colleagues, and the principal. His study included a number of instruments which can be used by other teachers who are individualizing instruction and who wish to have their performance evaluated within the context of a philosophy of individualization. Among the instruments included in this study were Student Assessment of Instruction, Instructor Self-Evaluation, and an Observation Form for Assessing Individualized Instruction. How these instruments were used and the process of evaluation is described in Peter's study which should be of great interest to principals and teachers concerned about alternative approaches to teacher evaluation.

Jean, an English teacher, has been introducing a number of changes in her classroom. She studied how effective these changes were in improving the classroom learning climate and the effectiveness of instruction. She introduced a system of peer observation and feedback to improve classroom climate, small group and individualized learning approaches, the use of student journals to record personal reactions about learning, and moral dilemmas to generate moral sensitivity and ideas for group discussion and student writing. Jean also redesigned her classroom to facilitate structured and non-structured approaches to teaching. Her study documents the implementation of these approaches and their impact on student learning and growth.

Peer teaching has generated many research findings which appear in the professional literature. Bernie, a mathematics teacher, implemented a peer tutoring program which required identification and training of student instructors and the development of an effective management system for using student instructors. He compared the effectiveness of this approach with other approaches to teaching mathematics and collected data to determine the impact of peer tutoring, not only on learning but also on the attitude of middle school students toward themselves and their peers.

An intriguing question for some teachers is how an individualized approach to instruction can be introduced into their classrooms while other more traditional approaches are maintained. Sue, a social studies teacher, investigated the problems and the effects of partial individualization of her social studies curriculum. For two or three days a week, she individualized her classroom, and for the other days she used more traditional group-centered approaches. She developed a number of curriculum units to facilitate partial individualization and is addressing the question of how to get students to use learning stations in the social studies curriculum. She designed several learning stations which, in combination with her curriculum units, constitute the main thrust of her partial individualization program. Her research documents this approach and its effects on student learning.

These real examples should make evident the value of action research in addressing instructional and learning problems. The process of adapting research and conducting school problem-centered research constitute one of the best ways to improve learning for students. The middle school teachers who conducted the studies described here give evidence of the commitment and involvement of professionals who are continually learning, innovating, and evaluation to enhance the learning of their students. Finally, they demonstrate that action research is a powerful form of staff development and school improvement.

Dr. Gerald Pine is a Professor of Education in the School of Human and Educational Services of Oakland University, Rochester, Michigan.

REFERENCES

Carini, Patricia F. (1975) *Observation and Description: An Alternative Methodology for the investigation of Human Phenomena*. Grand Forks, North Dakota. University of North Dakota Press.

Chall, Jeanne. (1975) "Restoring Dignity and Self Worth to the Teacher." *Phi Delta Kappa*, 57, (3), November, 170-174.

Goodlad, John I., Klein, Frances, et al. (1970) *Behind the Classroom Door*. Worthington, Ohio: Jones Publishing Company.

Graham, Patricia. (1979) "Let's Get Together on Educational Research." *Today's Education*, 68, 1, 26-30.

Jackson, Philip W. (1968) *Life in Classrooms*. New York: Holt, Rinehart, & Winston.

McKenna, Bernard. (1978) "School Based Interactive Research and Development on Teaching: A Promise for More Effective Teaching Profession." *Interactive Research and Development on Teaching*. Newsletter of Far West Regional Laboratory, California.

Mergendoller, John R. (1979) "Collaborative Research on Teaching." Paper presented at the April Conference on Alternative Research Models, St. Louis University, St. Louis, Missouri.

Mehan, Hugh and Wood, Houston. (1975) *The Reality of Ethnomethodology*. New York, John Wiley & sons.

Pine, Gerald J. (1980) "Collaborative Action Research: The Integration of Research and Service k" Chapter in *Research, Adaptation, and Change*. Teachers Corps Publication. U.S.O.E., Washington.

Pine, Gerald. (1979) "Teacher Adaptation of Research Findings Through Inservice Education." Adapting Educational Research: Staff Development Approaches. Teacher Corps Publication U.S.O.E., Washington, D.C.

Schaefer, Robert J. (1967) *The School As A Center of Inquiry*. New York: Harper & Row.

Wise, Robert I. (1977) "A Case for the Value of Retrospective Accounts of Curriculum Development." A paper presented at the Annual Meeting of the American Educational Research Association, New York, April.

BRUCE JOYCE, CARLENE MURPHY, BEVERLY SHOWERS, AND JOSEPH MURPHY

Reprinted with permission from Educational Leadership, November 1989.

School Renewal as Cultural Change

When teachers in Richmond County, Georgia, were organized into study groups to help them learn new teaching strategies, their students' achievement and behavior improved markedly.

During the past two years we and our colleagues have developed a school improvement program based on principles derived from research on:

- the culture of the school and the process of innovation,
- the ways teachers learn new teaching strategies,
- the ways teachers transfer new skills into the classroom, and
- models of teaching and teaching skills.

Our design restructured the workplace—organizing teachers into collegial study groups, providing regular training on teaching, and inducing faculties to set goals for school improvement and strive to achieve them.

We can now begin to report the degree of change that occurred and the lessons we learned in the process. Some of the effects have been dramatic. For example, in one middle school only 30 percent of the students reached promotion standards the year before the program began. That number rose to 72 percent during the first year of the program and 94 percent during the second year. However, because the effects have not been uniform, we have begun to learn what factors explain the varying degrees of success. For example, achievement rose more rapidly in social studies and science than in the language arts. This finding prompted us to inquire into the reasons and to try to reorient future work for more rapid across-the-board results.

In addition, while virtually all the teachers learned to use the teaching strategies to a mechanical level of competence, some reached much

Under the guidance of their teacher, Lisa Annis, 4th grade students work cooperatively on an inductive thinking lesson.

higher levels of skill, and these differences were reflected in the achievement of their students. On portions of the Iowa Tests of Basic Skills, the median students of teachers who reached the higher levels of skill fell between the 85th and 90th percentiles of the students whose teachers reached only mechanical levels of use. This finding led us to search for ways to improve training to ensure that *all* teachers reach the level of skill that will provide their students with expert instruction.

In this first report of our work, we describe the shape of the project, its results in the three schools involved from the beginning, and the first steps in our search to refine and improve our procedures.

An Organic Approach

We adopted an organic approach to school renewal, restructuring the workplace and introducing training to bring the study of research-based teaching strategies into the regular workday of teachers.

We subscribe to Fullan's (1982) thesis that it is the bond of shared understandings and common language that sustains innovations and reduces the stress of change. Also, we designed our training around the theory-demonstration-practice-coaching paradigm that has been found to bring about high levels of skill and implementation (Joyce and Showers 1987). We used a "peer-coaching" process: the teachers were organized into study groups and the faculties into problem-solving groups. The content of our training has focused on teaching strategies that increase students learning by affecting their aptitude to learn (Joyce and Weil 1986).

We intended that the development of shared understandings would develop vertical and horizontal social cohesiveness, thereby reducing administrator-teacher divisions while increasing cooperation between classrooms and teams of teachers. Our training paradigm was intended (a) to enable teachers to develop high levels of skill in the content of the program, and (b) to bring teachers and administrators together in study groups committed to implementing instructional changes and achieving goals for school improvement. Another effect of the study groups was to contribute to faculty cohesiveness and, thus, to reduce isolation.

> **Our training paradigm brought teachers and administrators together in study groups committed to implementing instructional changes.**

The models of teaching we selected had a research history indicating that they could bring about fairly rapid improvement in student learning. The initial models included cooperative learning, mnemonics, concept attainment, inductive reasoning, and synectics. The teachers studied how to organize classrooms into study teams, how to use link words to assist memorization, how to classify information into categories, learn concepts, build and test hypotheses, and use analogies to reconceptualize problems and generate solutions to them. All of these models addressed student learning problems characteristic of the schools involved in the initial phases of the project.

These planned changes in the workplace are easy to describe and, on the surface, easy to implement. Organizing staffs into study groups, providing regular training in models of teaching, and making concerted efforts to achieve specific goals are changes that hardly call for radical rhetoric. For many of the teachers and administrators, however, these changes required difficult adaptations in patterns of behavior and ways of thinking. In negotiating these changes, we have learned much about problems that must be solved during the period of change.

Context and Planning

We implemented our program in Richmond County, Georgia, where 50 schools and 1,800 teachers serve 33,000 students. The school district serves the city of Augusta and the surrounding county, with a combined population of about 200,000 people. The principal industries of the region are chemical processing, pulp processing, textile manufacturing, metalworking, brick and clay manufacturing, and food processing. The major employers are Fort Gordon, the Medical College of Georgia, and the Savannah River Plant located in neighboring South Carolina. Many of the students in the district are economically disadvantaged. In the three participating schools, over two-thirds of the students received subsidized meals.

Low student achievement had long frustrated many of the schools in the district. Despite Chapter One and special education programs, a variety of programs for at-risk students, regular revision and upgrading of curriculum and instructional materials, and 14 years of staff development, many students remained in academic difficulty. In the middle school mentioned above, half of the students were receiving attention from special programs, yet 70 percent of the student body was achieving below the levels set by the state and district for promotion on merit.

We began our planning in January 1987 with intensive seminars for cabinet level staff. By March, district administrators had decided on the general dimensions of the project. During the first two years, the consultants (Joyce and Showers) would provide most of the training, but a cadre of

The development of the district cadre symbolized the intent to make permanent changes in the workplace.

teachers and administrators would be trained to offer service to other teachers and administrators—to bring other schools into the project on a regular basis in the future.

The development of the district cadre was critical to the project and to the relationship between the district and the consultants. it symbolized the intent to make permanent changes in the workplace. It made concrete the need for district personnel to possess the expertise of the consultants and to take over the functions of the consultants.

Our efforts during the first year (phase one) concentrated on three schools and the initial preparation of the cadre. During the second year (phase two), we added four more schools and prepared the cadre to add other schools during the following year. During the third year, two more entire faculties will be added: and teams from 10 other schools will begin training to become leaders of the process in their schools. The cadre provides follow-up training throughout the school year, for study teams cannot be left to maintain themselves. Regular training will become embedded in the workplace.

Schools competed to participate in the first three phases. We asked principals to poll their staffs to determine interest in summer training and a closely monitored implementation effort throughout the academic year. We asked principals to submit letters of application if faculty interest was high. The first year, 12 of the 13 schools invited to participate submitted applications. The superintendent's cabinet and the department directors selected one middle school and two elementary schools for phase one and one high school and three middle schools for phase two. Each faculty member in these schools had made a written commitment to:

- attend summer training,
- practice the new teaching strategies with peers regularly throughout the summer and share plans for implementation during the fall.
- employ the new strategies regularly throughout the 1987-1988 academic year.
- work with peer study groups during the academic year in planning lessons and visiting one another in classrooms.
- participate in regular training activities during the school year.
- make videotapes of their teaching on a regular basis.
- participate in a similar program in the summer of 1988 and during the 1988–89 school year.

The summer programs included two weeks of intensive training, followed by six weeks of practice and design of lessons for the fall. and the organization of study groups. We asked all participants to practice the teaching strategies no less than 30 times apiece during September and October and to strive to incorporate them into their active repertoires by the end of October. The study groups were to meet weekly; between meetings, members were to visit one another in their classrooms to study the children's responses to the teaching strategies and plan to teach the students to respond more powerfully. Our intent was to involve the faculties immediately in collective action that would have rapid effects on student learning.

Initiation and Initial Response

The training, practice, organization of study groups, development of short-run school goals, and initial classroom use of the teaching strategies occurred more or less as planned.

Learning to work together. Participants planned lessons they would teach, then shared their plans—and their skepticism about whether the plans were practical. The models of teaching were new to almost all the teachers and their students; they required substantial amounts of new learning. Administrators scheduled time for study groups to meet; they also practiced the strategies in classrooms, as did counselors and supervisors. Some study groups were comfortable planning and sharing, while others were anxious. New teachers hired at the last minute had to be integrated into the process.

The success of the study groups depended on the leadership of teachers. Because leadership was uneven—

We asked all participants to practice the teaching strategies no less than 30 times apiece during September and October.

some groups had several energetic leaders while others had none—we reorganized the groups several times to distribute initiative throughout the schools. At the end of the second year, the study groups still depended on the leadership of a relatively small number of teachers and the stimulation of the cadre to help them learn new teaching techniques.

We asked the study groups to concentrate on teaching their students how to respond to the models of teaching they were learning. They had been told that, although the students might respond immediately to the new cognitive and social tasks presented by those models, it would take about 20 practices before students would become really proficient. The initial goal for student skill would be attained when a trainer could enter the classroom, announce the model to be used in a lesson, and students could respond efficiently and comfortably. The goal for teachers was to bring students to that level of proficiency as rapidly as possible. The study groups gradually learned to track student progress and design ways of accelerating learning.

As we had hoped, there were immediate and positive effects on students. Especially visible was the reduction in disciplinary referrals. Many teachers reported that their students liked the new teaching strategies and that classroom management was easier. Some of the teachers became very excited about the increase in cooperative activity and the positive responses of their students. Some were anxious as they altered their familiar classroom routines; they worried because they could not predict how their students would respond until both they and their students had experience with the new procedures.

Academic year training. At six-week intervals during the first and second years we provided regular assistance to the faculties, derived from our observations of the staff. Through direct observation and the examination of videotapes, we gathered information about implementation and devised demonstrations and practicums to address the needs we saw. With the supportive relationship among the staff development director, consultants, and the principals of the schools, problems could be identified and approached.

Changing the workplace climate to one of cooperative study and decision making was a complex process marked by uneven progress.

Progress. By stages, the new teaching strategies became familiar and the study groups learned to function together. By the beginning of the second year, the operation in the phase one schools was relatively smooth. Each faculty had a few members who still hoped the project would go away, but teacher leadership within the faculties was dominant in maintaining and extending the study groups and practice.

The cadre. During the winter and spring of 1988, we selected candidates for the cadre. The candidates, who were teachers and administrators from throughout the district, submitted applications and videotapes of classroom teaching to demonstrate their competence with the models of teaching they had practiced.

Cadre training included assisting with the introductory workshops for the phase two schools. By the end of July they had designed courses and workshops to be offered at the district level during the 1988-89 school year. They also provided assistance to phase one and two study teams, prepared training materials, developed videotaped demonstrations of teaching, and studied research on training and teaching.

Formative Evaluation

Throughout the project, we have collected information about changes in the workplace, the implementation of the models of teaching, and effects on students. Our analysis of this information guides the reshaping of the training and the orientation of new schools and provides estimates of the extent to which the goals are being achieved. Now we will discuss the general picture for the phase one schools.

The workplace. Changing the w[illegible]place climate to one of cooperative study and decision making was a complex process marked by uneven progress (as described by Sudderth 1989, Black 1989). All three schools showed the individualistic organization that Lortie considered typical of American schools (Lortie 1975), and two of them had histories of very high staff turnover (about one-third annually), typical of schools with reputations for being troubled. Few teachers sought the leadership of other teachers—most were oriented toward their *own* classrooms. For these faculties, increasing collegial interaction was quite an innovation.

After a few weeks, some teachers emerged as the leaders in the transfer process. They developed "executive control" over the models and applied them appropriately in their teaching and learned to share lessons and demonstrate for their peers. They also instigated concerted efforts to teach the students to respond to the mod[illegible] Some who developed executive c[illegible]trol eschewed leadership, however, wishing to avoid conflict with resistant colleagues. By the end of two years, the number of teacher-leaders who have emerged is just enough to keep the study groups going, and the teacher leaders need continual assistance from the cadre.

Schoolwide objectives for teaching the students to respond to the models of teaching were very important. For example, administrators led the teachers in establishing "cooperative learning days," "writing days," "number facts days," and other schoolwide efforts. Although administrators' teaching skill and experience played an important role, more important was their "cheerleading" function and their willingness to "carry the flag" prominently.

Schoolwide objectives for improving the social climate of the schools were established only with difficulty, although two schools have made great progress. In both cases the schools had relied heavily on quasi-legal methods of control, chiefly suspensions. In one elementary school, there were nearly 200 incidents of suspension per year (in a student population of about 550). When disciplinary referrals began to drop, apparently as a result of students' increased involvement in learning, the building administrators seized the opportunity to induce the staff to reflect on the dynamics of management and the relationship between instruction and classroom control. Consequently, the staff worked hard to use instruction as the major mechanism of control and, during the second year of the project, only six students were suspended. The school had moved from massive reliance on suspension to minimal use, in extreme cases only. Nearly 1,000 days of lost instructional time were thus recovered, and management became a much less obtrusive feature of the school. The middle school had a similar problem and, although it still uses an in-house suspension program, out-of-school suspensions have dropped from about 150 per semester (again in a population of about 550 students) to about 35.

The faculties are still individualistic in many ways but show their increasing willingness to attack common problems. The services of process-oriented consultants would perhaps be timely, to enable the faculties to capitalize more fully on the collegial settings.

The extent of change in the workplace has affected the degree of implementation by individuals. The concerted implementations that occurred when building administrators generated "whole-school" goals became enthusiastic collaborations as faculties generated mnemonics to be employed throughout the school, or gave concentrated energy to "metrics," or otherwise worked together. Concerted efforts helped teachers learn that they can be effective as a faculty. However, unified efforts continue to be a function of the active leadership of the building administrators and lead teachers. Only by being *very* active can they maintain collective activity.

Although administrators' teaching skill and experience played an important role, more important was their willingness to "carry the flag" prominently.

Implementation of the Teaching Models

The administrators observed their teachers on a regular basis and collected records of their use of the teaching strategies. Predictably, use of the models of teaching varied widely, from tentative and minimal use to regular and appropriate use. Administrators reported extensive use by about three-fourths of the faculty members, with moderate use by most of the others. From each school six teachers were selected randomly and observed and interviewed regularly throughout the year to determine quality of use (see Showers 1989). The 18 teachers were also videotaped near the end of the school year, and we analyzed those tapes to determine the level of skill they had achieved.

The training and use of the study group format were designed to ensure that 75–90 percent of the teachers would reach a mechanical level of use of at least two of the teaching strategies by the end of the first year. This goal was achieved during the first year. About one-third of the teachers developed a high level of skill in using three or four models of teaching. Another third learned to use at least two of them with a satisfactory level of competence. About half of the remainder were able to use one or more of them to a mechanical but not fluid level.

During the second year, the phase one teachers have continued to develop and consolidate skills. They are much more comfortable with the addition of new models but continue to struggle with new skills until they have practiced them about 20 times. The study groups and the use of peer coaching continue to be important as new models are introduced. More than 50 videotapes have been made to demonstrate aspects of the teaching strategies where the teachers have had difficulty. These, together with dozens of "live" demonstrations, have helped greatly, but the road to executive control is a rocky one for many of the teachers. Because the reading and language curriculums of the district are tightly prescribed, most "legitimate" use of the models of teaching has been

Disciplinary referrals began to drop, apparently as a result of students' increased involvement in learning.

in the social studies, mathematics, and, in the middle school, the sciences. In these curriculum areas the opportunity for use has been greatest; therefore, we understand the impact on student achievement that we have found there.

Student Learning

Our study of student learning has had two objectives: (1) to learn whether differences in teacher skill in using the new strategies is associated with student learning; and (2) to learn whether our effort narrowed the gap between students from poor families and their wealthier counterparts.

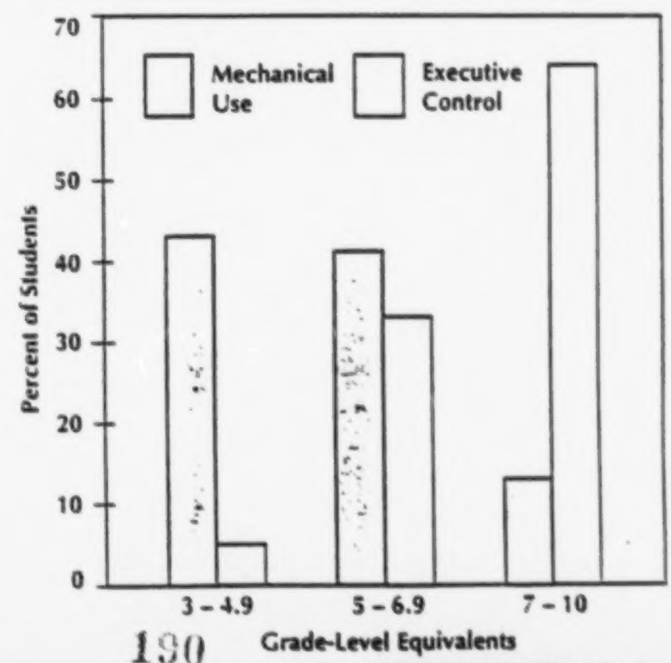
The clearest test of the first question was in the elementary schools where, in self-contained classrooms, individual teachers have instructional responsibility for curriculum areas other than reading. To determine whether any differences in achievement were a function of developed ability to learn, we used reading level as an indicator of general competence. We compared the classes of the teachers who had reached executive control with those of the teachers who performed at the mechanical level, with respect to reading level. We found them to be about equal in both mean and range.

The social studies tests from the Iowa Tests of Basic Skills battery was administered to the 5th grade students at the end of the second year. The achievement of the classes whose teachers had reached executive control was compared with the classes whose teachers used them mechanically (and, thus, generally less than they could be used appropriately).

When the two distributions are compared, the median student in the "executive control" classes is between the 85th and 90th percentiles of the "mechanical use" classes. Compared to national norms, the median student of the "executive control" classes was at the 76th percentile, compared to the 44th percentile for the "mechanical use" classes. At the time the tests were given, the median grade-equivalent score for the national sample was 5.8. The median grade-equivalent scores for the "executive control" classes range from 6.5 to 7.9, or from 0.7 to 2.1 above the national median. For the "mechanical use" classes, the range was from 5.0 to 6.1. The distributions of the extreme classes barely overlap. Figure 1 depicts the comparison between the "executive control" and "mechanical use" classes in grade-equivalent terms.

The message is clear. Skillful implementation of these research-based teaching strategies can have a substantial impact on student achievement. However, to reach their full potential, these models must be used with considerable skill and frequency. The "mechanical use" classes are not achieving badly in normative terms—in fact they are above average for schools equivalent in socioeconomic status—but their students could have learned much more. Thus, we need to find ways of increasing the impact of training. We have many clues about how to achieve this, particularly for providing more explicit training for those teachers who require it; some our previous research on the relationship between conceptual level of teachers and need for structure in

Fig. 1. Comparison of "Executive Control" and "Mechanical Use" 5th Grade Classes in the Social Studies



BEST COPY AVAILABLE

Now most of these students will not be wiped out in the economic marketplace, as appeared to be their destiny.

training will be useful here (Joyce et al. 1981).

The best answer to our second question—whether we narrowed the achievement gap between the children of the poor and their economically advantaged counterparts—lay in the study of the middle school. The promotion rate for the school rose from 30 percent before the project began to 70 percent at the end of the first year and 94 percent at the end of the second year, using the same standards for promotion. The magnitude of the increase certainly indicates that student learning is on the rise.

Because the school district administrative staff and, reportedly, members of the board of education place more credence in "standard tests" than on local tests and teacher judgment of achievement, the district's staff development unit administered the ITBS battery in science, social studies, mathematics, and one language test at the end of the second year to attempt to confirm the standards used for promotion in normative terms. This testing also provided us with the opportunity to explore whether the 8th grade students, who had been exposed to the program for two years, had gained on their wealthier counterparts.

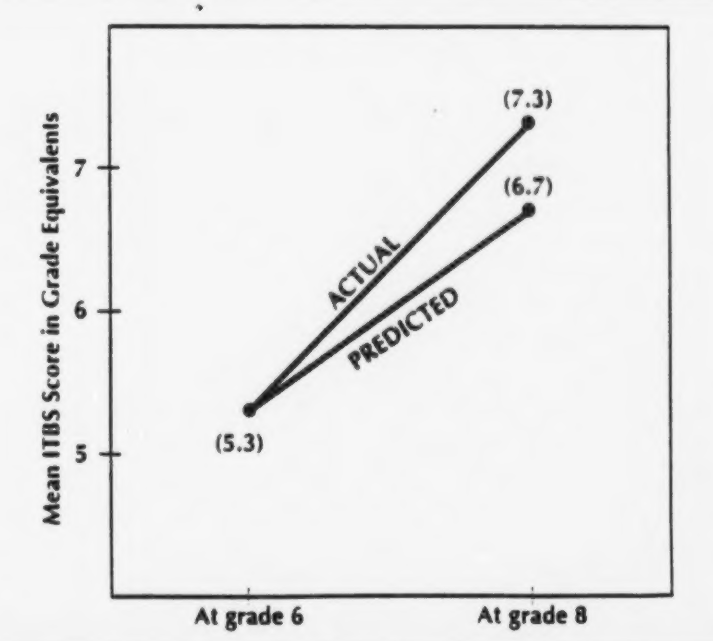
The analysis, which compared 6th and 8th grade students, dealt with our question about whether the students had nonetheless continued to fall behind "middle class" students. It confirms our impression that the majority of the students are now making "normal" progress.

The social studies scores of the 6th grade students indicate that, through the first six years of their schooling, the average student had been achieving the equivalent of about seven months of growth for each year in school (10 months of growth being, by definition, the average for the national sample). The mean score on the social studies test for the 6th grade was 1.5 grade equivalents below the national mean (5.3 compared with 6.8 for the national sample). If the students continued at that rate of growth, we would expect that in the 8th grade the mean would be 6.7. However, the 8th grade mean was 7.3 for social studies, still below the national average but six months higher than their past rate of growth had been (see fig. 2).

Their probable rate of growth was about average for the national sample. The mean grade equivalent was 7.5 for science and 7.7 for mathematics. In the 6th grade, only five 6th grade students scored as high as 7.0. By contrast, 13 8th grade students scored 10.0 or higher, indicating that the school had become an environment that would support above-average achievement.

Given the educational history of the school, it is quite an accomplishment for it to become a place where average achievement is now normal. Much remains to be done, of course, especially to increase the executive level use of the teaching models and to drive toward equality in overall achievement. However, if the current levels of achievement can be sustained, most of these students will not be wiped out in the economic marketplace, as appeared to be their destiny before the

Fig. 2. Predicted and Actual Achievement in Middle School Social Studies



BEST COPY AVAILABLE

program was initiated. Moreover, if the students can increase their learning rates as much as they appear to have done, there is no good reason why they cannot be helped to increase them still further.

From Anxiety to Pleasure

This project relies on staff development to reorganize the workplace and help teachers learn teaching strategies. Hence, it is different from a curriculum or technological innovation where a new program of study or learning device is "put into place" and its effects are studied. In our project, as appropriate implementation is achieved, effects are expected to be gradual but eventually large. The district has been able to bring about large changes in the workplace, and the cadre development has been splendid. The phase one teachers have practiced unfamiliar strategies until many of the teachers have reached a good level of skill with them. The study groups are functioning, and the school faculties as a whole are making concerted efforts to advance student achievement in specific areas. The students are learning more, and social control is more a function of instruction than of coercion.

The phase two schools are in about the same developmental stage as were the phase one schools a year ago, with uneven implementation and a great deal of skepticism on the part of many teachers. The pessimistic attitudes of many teachers about the possibility of improving student learning are not intractable, but success by peers has little apparent effect on it. The practice of collective action does have effect, albeit gradual, provided the workplace is changed to make cooperative behavior the norm.

We do not believe that success in improving student learning will sustain the collaborative activity. Success makes it easier to reiterate the purpose for changing the workplace, but the schools will surely return to their previous states fairly rapidly unless they are well tended. Also, success in some schools does not inspire most teachers in other schools. The most active resistors fight the cadre as actively as they fight consultants from outside the district—and the cadre have less experience in dealing with resistance.

Collective action does have effect, albeit gradual, provided the workplace is changed to make cooperative behavior the norm.

However, the changed organism offers many satisfactions—and the concerted schoolwide efforts are rewarding to those teachers who experience the power of working together and the real and immediate effects on the students. Better-planned lessons are more satisfying to teach, and borrowing the ideas and materials of others becomes a pleasurable source of success.

The collegial setting is least satisfying to the least-prepared teachers, whose shaky hold on subject matter and uninspired teaching is unmasked in the collegial environment. This is necessary but sad; and it takes a long time to remedy, for the least competent teachers learn both subject matter and teaching practices more slowly than do the others. It is natural that they would want to hide in their classrooms. Nevertheless, the charisma of the most inspired teachers should dominate the environment. Where it does, the learning climate can change quite rapidly—far more so than conventional wisdom would predict.

In the few schools we have been discussing, hundreds of students are daily experiencing success and can expect promotion rather than failure and, just as important, know they have earned that promotion. Social control is becoming an effect of instruction rather than "management." Teachers are learning from one another and are welcoming the fruits of research into their repertoires. It is a pleasure to watch their transition from anxiety to pleasure in the company of their colleagues.□

References

Black, J. (1989). "Building the School as a Center of Inquiry: A Whole-School Approach Built Around Models of Teaching." Doctoral project, Nova Universit Fort Lauderdale, Florida.

Fullan, M. (1982). *The Meaning of Educational Change.* New York: Teachers College Press.

Joyce, B., and B. Showers. (1987). *Student Achievement Through Staff Development.* White Plains, N.Y.: Longman, Inc.

Joyce, B., L. Peck, and C. Brown, eds. (1981). *Flexibility in Teaching.* White Plains, N.Y.: Longman, Inc.

Joyce, B., and M. Weil. (1986). *Models of Teaching.* Englewood Cliffs, N.J.: Prentice-Hall, Inc.

Lortie, D. (1975). *Schoolteacher.* Chicago: University of Chicago Press.

Showers, B. (1989). "Research-Based Training and Teaching Strategies and Their Effects on the Workplace and Instruction." Paper delivered at the annual meeting of the American Educational Research Association, San Francisco.

Sudderth, C. (1989). "The Social Battleground of School Improvement." Paper delivered at the annual meeting of the American Educational Research Association, San Francisco.

Bruce Joyce and **Beverly Showers** are Directors of Booksend Laboratories, 3830 Vine Maple Dr., Eugene, OR 97405. **Carlene Murphy** is Director of Staff Development for the Richmond County Schools. She can be reached at the Staff Development Center, 804 Katharine St., Augusta, GA 30904. **Joseph Murphy** is Dean of the Faculty of Education at Augusta College, Augusta, GA 30910.

Journal of Curriculum and Supervision
© Winter 1989, Vol. 4, No. 2, 126-145

NURTURING THE REFLECTIVE PRACTITIONER THROUGH INSTRUCTIONAL SUPERVISION: A REVIEW OF THE LITERATURE

JAMES F. NOLAN, *The Pennsylvania State University*
TONYA HUBER, *The Pennsylvania State University*

Reprinted with permission from the Journal of Curriculum and Supervision, Winter 1989, Vol. 4, No. 2. Copyright by ASCD.

During the last five years, much literature in the fields of teacher education and instructional supervision has focused on the need to help teachers become more reflective about their teaching. Although many would agree that helping teachers to become more reflective is an important goal, little is known about processes that might encourage reflective practice. The purpose of this paper is to draw together the professional literature on reflective practice as applied to teaching and the literature on instructional supervision to begin to identify supervisory practices effective in encouraging reflective practice in teaching.

The first section of the paper contrasts the view of teaching as technical rationality with the view of teaching as reflective practice and examines the purposes of supervision inherent in each of the two perspectives. The second section examines our current understanding of the nature of reflective teaching by giving an overview of the literature on reflection in teaching. Finally, the last section reviews the empirical research on the use of instructional supervision to promote reflective teaching practice and outlines a series of questions for future study and inquiry.

CONTRASTING VIEWS OF TEACHING AND SUPERVISION

> Until fairly recently, there was an exclusive preoccupation with the bureaucratic use of instructional supervision as a form of social control over teachers, albeit in the guise of enhancing efficiency. There was a quite deliberate attempt to centrally control and regulate pedagogy, knowledge, and behavior of teachers through elaborate systems of prescription, inspection, and evaluation.[1]

The view of instructional supervision described in this statement assumes a view of teaching characterized by technical rationality. When viewed from

---

[1] W. John Smyth, "Toward a 'Critical Consciousness' in the Instructional Supervision of Experienced Teachers," *Curriculum Inquiry* 14 (Winter 1984): 429

BEST COPY AVAIL

this perspective, teaching becomes simply a matter of applying theory and research to achieve already established ends.[4] The teacher is seen as a technician who applies proven methods to solve classroom problems.

> If you deliberately use principles of learning which research indicates are accelerants to student achievement, you will have power to increase your students' motivation to learn, the speed and amount (rate and degree) of their learning and their retention and appropriate transfer of learning to new situations requiring creativity, problem solving and decision making.[5]

Both the problems of practice and the methods that can be used to solve them are considered generalizable across multiple individual contexts. As generalizations are drawn from research on effective teaching, for example, and are applied uncritically to improve student achievement scores, teachers are employing a technically rational conception of teaching.

Supervision, then, becomes a process of monitoring teachers' application of theory and research to practice and finding ways to help them use research and theory to make their behavior in the classroom more effective and efficient. The aim of supervision is to change teachers' behavior so they use theory and research more appropriately.

Contrasting sharply with the view of teaching as a form of technical rationality is Schön's conception of professional practice as reflection in action. According to Schön, the problems of practice are messy, uncertain, complex situations in which ends and the methods for reaching those ends are intertwined.[6] This view recognizes that problems of practice do not present themselves in a neat format in which goals or ends are immediately clear and only the methods to be used to achieve those ends are in question. This perspective recognizes that although research may help identify the best method for reaching a specified goal, it does not help sort out which goals are most important. Thus, those who view teaching as professional, reflective activity believe that the practitioner's first task in resolving the context bound problems of practice involves reframing the problem to identify goals or purposes that will be attended to and those that will be ignored, since all problems of practice call for choices among competing goals. Problem reframing involves mentally experimenting and manipulating contextual factors, generating alternative hypotheses about how the problem might be resolved, and mentally testing the alternative hypotheses. The processes of problem reframing and mental experimentation yield insights and discoveries that lead to actions aimed at resolving the problem and eventually to understanding and appreciating the problem in a new way. Schön terms this process of reframing

---

[4] Donald Schön, *The Reflective Practitioner: How Professionals Think in Action* (New York: Basic Books, 1983).

[5] Madeline Hunter, *Mastery Teaching* (El Segundo, CA: TIP Publications, 1982), p. 6.

[6] Donald Schön, *The Reflective Practitioner: How Professionals Think in Action* (New York: Basic Books, 1983).

ABLE

experimenting, acting, and reappraising in the midst of the problem situation "reflection in action."

According to Schon, each practitioner has built up through past experience a repertoire of examples, images, and understandings that can be useful when new problems are encountered. This repertoire provides multiple sets of metaphorical lenses that can be used to frame a particular problem as analogous to past problems. By viewing the new problem in terms of familiar metaphors and analogies drawn from past experiences, the reflective practitioner can often find a particular perspective on the new problem that leads to a successful resolution. Thus, the practitioner's skill in successfully using reflection in action hinges on the range and variety of the metaphorical lenses that can be brought to bear on new problems.

From this perspective, then, classroom teaching looks vastly different from the view of teaching as a form of technical rationality. So, too, the supervisor of the reflective practitioner faces a task far different from that of the supervisor who sees teaching as simply the application of research. Changing teacher behavior is not the most important goal of the supervisor who sees teaching as reflective practice. The critical task of the supervisor from the perspective of reflective practice is to help teachers engage in reflective behavior more successfully. Supervision from this perspective requires that the supervisor help teachers enrich the repertoire of images and exemplars that form the basis for reflective practice and help teachers use this repertoire to enhance their understanding of teaching.

Thus, the aims of supervision become (1) engaging the teacher in the process of reflective behavior while (2) fostering critical inquiry into the process of teaching and learning, thereby (3) increasing the teacher's understanding of teaching practice and (4) broadening and deepening the repertoire of images and metaphors the teacher can call on to deal with problems.

REFLECTION ON TEACHING: WHAT IS IT?

What is the nature of reflection in teaching? How can it be conceptualized? What is the relationship between supervision and reflection? Can supervision influence teachers to engage in reflective teaching? These and related questions will be addressed within a review of the literature on reflective practice in teaching.

Definitions

In defining reflective practice in teaching, Sykes posits three identifying aspects:

> 1. The distinctive employment of social science knowledge, utilizing arts of the eclectic and the practical, whereby multiple theories may be brought to bear unsystematically upon concrete, practical problems of practice,

2. The use of knowledge sources internal to practice to explore and modify one's actions with students and students' learning being the primary source.
3. The engagement in a process of critical inquiry directed at the interplay of means and ends, at problem frames as well as solutions, at the tacit assumptions and standard operating procedures of practice.[5]

Zeichner and Liston distinguish between reflective action and routine action, focusing on the need for reflective action rather than action guided primarily by tradition, external authority, and circumstance.[6] In reflective teaching, teachers engage in active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and its consequences. Thus, reflective teachers consistently assess the origins, purposes, and consequences of their work.

Perhaps the most comprehensive, though not exclusive, clarification of terms on reflection in teaching comes from Garman's research and writing. Her description of reflection as "the heart of clinical supervision" captures the essence of its importance in education, recognizing what research has pointed out and what every teacher already knows—the demands and commitments of teachers' daily lives render it difficult, if not impossible, to analyze and reflect on events in spare time. The only alternative is for teachers to improve their ability to monitor and reflect on classroom behavior as it occurs throughout the day. For supervision to significantly affect teaching, it must focus on enhancing this ability.

Garman sees reflection as "a primary process of inquiry within the teacher's practice."[7] The inquiry is targeted at developing teachers' most critical knowledge bases: inquiry knowledge, mythic knowledge, and craft knowledge.

> "Inquiry knowledge" results from the "search" aspect of research and is meaningful so long as there is direct connection to personal reality. Inquiry refers to knowledge generating, and the results are provisional and tentative, posited in light of new experience and insight. For the adult inquirer a certain process has to be set in motion, a process that involves reliving vicariously what once was originally lived through. It is this uncovering of taken for granted thought and action that amounts to a form of demythologizing. Without this we are forced to accept the verities of our mythic and craft sources in the guise of inquiry knowledge.[8]

According to Garman, professional knowledge requires that teachers employ the reflective approach to knowledge—"plan, act, reflect, evaluate" rather than the traditional application approach—"plan, implement, evaluate

---

[5] Gary Sykes, "Teaching as Reflective Practice," in *Critical Perspectives on the Organization and Improvement of Schooling*, ed. Kenneth A. Sirotnik and Jeannie Oakes (Boston: Kluwer-Nijhoff Publishing, 1986), p. 233.

[6] Kenneth M. Zeichner and Daniel P. Liston, "Teaching Student Teachers to Reflect," *Harvard Educational Review* 57 (February 1987): 23-48.

[7] Noreen B. Garman, "Reflection, the Heart of Clinical Supervision: A Modern Rationale for Professional Practice," *Journal of Curriculum and Supervision* 2 (Fall [illegible]

[8] Ibid., p. 11.

The application approach to knowledge is based on a conception of life that Young discredits in *The Reflective Universe*:

> The older concept of a universe made up of physical particles interacting according to fixed laws is no longer tenable. It is implicit in present findings that "action" rather than matter is basic: action being understood as something essentially undefinable and non-objective, analogous, I would add, to human decision.[9]

Schön, too, in *The Reflective Practitioner*, discredits the traditional "tried, taught, tested" approach.

> In real world practice, problems do not present themselves to the practitioner as givens. They must be constructed from the materials of problematic situations that are puzzling, troubling and uncertain. . . . Because each practitioner treats his case as unique, he cannot deal with it by applying standard theories or techniques. He must construct an understanding of the situation as he finds it. And because he finds the situation problematic, he must reframe it.[10]

After reframing the problem, the practitioner experiments and analyzes the consequences and implications of both hypothetical and real actions. Finally, reflection in action involves a reflexive interchange between the practitioner and the situation because the situation may have changed during the experiment. The situation talks back, and the listening practitioner reframes the situation again.

In Garman's framework, the people involved are primary, and the concepts of action and reflection become critical as reflective practitioners, faced with many minute-by-minute changes, issues, and questions of the classroom setting, decide courses of action:

> Reflection is not a mental reexamination of past events aimed at justifying actions or defending the consequences. Neither is reflection a way of determining what should have been done—a way of replaying the scenario with a slightly different script. Reflection is done carefully, using stable versions (often written) of the experience with more than one round of written interpretations. "Reflection on action" refers to a formal procedure for studying immediate, at-hand events in order to understand them and to develop a construal (or construals) for useful practice. "Reflection through recollection" is used when one does not have available the stable records of immediate events. . . . Reflection through recollection can also be a formal way of introspection—through examination of the sources of one's mythic and craft knowledge as well as one's emotional reactions and dispositions. Both forms of reflection are processes of inquiry which include written interpretations and confirmation from other sources.[11]

In sum, the reflective practitioner consistently approaches the problems of teaching in a thoughtful, curious manner and believes that one of teaching's main outcomes is a greater understanding of the teaching learning act. By

---

[9] Arthur M. Young, *The Reflexive Universe* (San Francisco: Delacorte Press, 1976), p. xxiv.

[10] Donald Schön, *The Reflective Practitioner: How Professionals Think in Action* (New York: Basic Books, 1983), pp. 40 and 129.

[11] Noreen B. Garman, "Reflection, the Heart of Clinical Supervision: A Modern Rationale for Professional Practice," *Journal of Curriculum and Supervision* 2 (Fall 1986): 15.

BEST COPY AVAILABLE

questioning continually the origins, purposes, and consequences of teaching behavior, the reflective practitioner develops an ever deepening repertoire of metaphors, analogies, and exemplars that are useful for resolving and understanding practical problems.

Levels of Reflection

Van Manen conceptualizes three levels of reflectivity in understanding professional practice: technical rationality, interpretive communication, and critical reflection.[11] The first level, *technical rationality*, is concerned with efficiently and reflectively applying educational knowledge to attain ends that are accepted as given, ends that are not viewed as problematic. The practitioner functioning at this level focuses on questions of how to adapt and modify research generalizations to match individual contexts. The level of reflectivity termed *interpretive communication* focuses on the problem of explicating and clarifying the meaning of individual and cultural experiences as well as assumptions and predispositions underlying practical affairs and choices. Every professional experience or action is linked to particular values and competing educational ends. At the third level of reflectivity, *critical reflection*, the practitioner incorporates moral and ethical criteria into the discourse about practical action. The focus of critical reflection is to determine which educational goals, experiences, and activities lead to forms of life mediated by concern for justice, equity, and concrete fulfillment and to determine whether current arrangements serve important human needs and satisfy important human purposes. The ends and means of teaching and the surrounding contexts, at this level of reflectivity, are viewed as value governed selections from a larger universe of possibilities.[12]

Zimpher and Howey identify four domains of teacher competence, ranging in complexity from technical, to clinical, to personal, to critical.[13] Technical competence involves learning and using specific skills or techniques, such as improving use of wait time.[14] This domain of competence exhibits the lowest level of reflectivity. Achieving clinical competence requires that practitioners examine what they are doing in the classroom and make needed changes based on inquiry and reflection into these actions. Clinical competence for groups of teachers requires action research and practical deliberation among colleagues to solve common problems. The third domain, that of personal competence, requires "a movement from self awareness and survival concerns on the part of teachers to using knowledge of adult moral and cognitive development to inform teacher practice . . . fostering an understanding of self in the context of teaching and dealing with survival concerns."[16] In interpersonal activities, personal competence is achieved through feeling a sense of community and colleagueship with other teachers; resolving issues of power, authority, and responsibility; and facing moral dilemmas in teaching and evaluating ethical consequences. Achieving critical competence, the fourth domain of professional competence, requires moving from consciousness-raising about school practices to collaborative or critical inquiry to reconstruct and transform school and society. Critical competence is also evidenced by teachers who examine the hidden dimensions of schooling, disclose misconceptions, and generate plans to benefit the school and community. The level of reflectivity increases with each domain of competence. According to Zimpher and Howey, reflection can be enhanced by using appropriate supervisory practices within each domain of competence.

---

[11] Max Van Manen, "Linking Ways of Knowing with Ways of Being Practical," *Curriculum Inquiry* 6 (No. 3, 1977): 205-228.

[12] Kenneth M. Zeichner and Daniel P. Liston, "Teaching Student Teachers to Reflect," *Harvard Educational Review* 57 (February 1987): 23-48.

[13] Nancy L. Zimpher and Kenneth R. Howey, "Adapting Supervisory Practices to Different Orientations of Teaching Competence," *Journal of Curriculum and Supervision* 2 (Winter 1987): 101-127.

[14] Mary Budd Rowe, "Wait Time: Slowing Down May Be a Way of Speeding Up," *Journal of Teacher Education* 37 (January-February 1986): 43-50.

Procedures for Enhancing Reflection

Garman also provides a procedural representation for the processes of reflection on action and reflection through recollection. The formal structure of reflection on action follows a procedure similar to Cogan's cycle of supervision:

- Initially, a specific event (or events) from the classroom is selected for the purpose of study.
- Garman stresses the importance of recording "stable data" so that the teacher can return to the data and analyze and interpret it with others—supervisor, peers, students. Verbatim data provided by an observer, audiotapes, or videotapes all afford such data.[17]
- The meaning of the data then needs to be discovered, verified, explained, interpreted, and evaluated for patterns and insights. Findings should be recorded—in narrative, notes, or journals—for reference and to enable continued pattern analysis. The use of educational theory and literature becomes important at this stage.
- "The events and meanings are put in an abbreviated, manageable (often conceptual) form for future use: an insight, concept, principle, significant incident, portrait, or conceptual framework are examples of a construal. The essence of reality is 'construed' from one form to another."[18]

---

[16] Nancy L. Zimpher and Kenneth R. Howey, "Adapting Supervisory Practices to Different Orientations of Teaching Competence," *Journal of Curriculum and Supervision 2* (Winter 1987) 113

[17] Noreen B. Garman, "Stable Data and Clinical Supervision" (paper presented at the annual conference of the Association of Teacher Educators, New Orleans, April 1984)

[18] Noreen B. Garman, "Reflection, the Heart of Clinical Supervision: A Modern Rationale for Professional Practice," *Journal of Curriculum and Supervision 2* (Fall 1986) 15

- Finally, the construal must be confirmed by determining whether it has meaning for other practitioners or researchers.

The second structure Garman provides is a procedure for reflection through recollection:

- Initially, the practitioner recalls past events or images. Because recollection provides reflection from a different perspective, accuracy is not the critical issue here that it is in collecting stable data for reflection on action. Rather, the practitioner recognizes that significant details are more likely to be recalled and that recollections will be recalled with emotional attachments.
- The recollection must then be captured, most commonly in journal writing, but possibly in audiotaping or creative modes.
- Having captured the recollection in form, it can now be subjected to further consideration and attempts at discovering construals.
- As with reflection on action, the final step is to confirm discoveries or constructs to determine what information or research from other practitioners can reveal or clarify about the construal.

Although Garman believes the practitioner must be familiar with the procedures of reflection on action—acting, recording, writing, interpreting, construing, and confirming—the procedures for reflection through recollection are not as clear-cut. In both cases, the sequence is not as important as the knowledge obtained; thus, the possibility of self understanding and professional competence increases.

Goldsberry and Nolan's definition of the reflective conference clarifies the supervisor's role in nurturing the reflective practitioner: "a face to face meeting between supervisor and teacher in which the supervisor guides the teacher through a process of analyzing teaching behaviors and their impact on learners."[19] The reflective conference is characterized by (1) a foundation built on the teacher's "platform of aims"[20] or "espoused platform,"[21] (2) a focus on learner outcomes or student behaviors as the appropriate measure of teaching behavior, (3) shared control of the conference, (4) reflection guided by the supervisor who functions as guide while the teacher functions as decision maker, and (5) a spirit of experimentation from which to test understandings and predictions. "To act reflectively about teaching," as Smyth explains, "is to pursue actively the possibility that existing practices may effectively be changed and, in light of evidence about their efficacy, replaced by alternatives."[22]

---

[19] Lee Goldsberry and James F. Nolan, "Reflective Supervisory Conference" (unpublished manuscript, The Pennsylvania State University, 1982), p. 1.

[20] Ibid.

[21] Thomas J. Sergiovanni, "Toward a Theory of Clinical Supervision," *Journal of Research and Development in Education* 9 (Winter 1976): 20–29.

[22] W. John T. Smyth, ed., *Case Studies in Clinical Supervision* (Geelong, Australia: Deakin University Press, 1984), p. 69.

Impediments to Reflection

The supervisor who wishes to employ these procedures to enhance reflective practice faces a formidable task. Sykes identifies four impediments to achieving the reality of the reflective practitioner:

> 1. Facing complex tasks and making decisions under uncertainty, the press to act in the classroom setting typically precludes the opportunity to reflect. . . . Teachers, like most people, frequently resort to action rather than analysis to solve problems.
>
> 2. Teachers regularly confront the unique and idiosyncratic in their students, exercise imperfect control over the contingencies of learning and sense the ambiguities surrounding competence. . . . Teachers do not regard their interactions with students as exhibiting stable patterns which warrant systematic inquiry.
>
> 3. Teaching is one of the few professions which people have already experienced in their life time. Teachers have already spent more than a dozen years of their lives "in" education. Teachers tend to teach as they were taught, and little in their experience suggests what might be problematic in their approach.
>
> 4. Teachers work in isolation; trial and error and learning by doing are the most prevalent forms of learning on the job, with the imperative for control of behavior dominating instruction.[23]

Despite these formidable barriers to reflective practice, Smyth remains optimistic about the potential of clinical supervision to transform teaching practice:

> Teaching need no longer remain an impulsive, routine or technical activity. . . . Once teachers see the utility of data collected about their teaching, they become more deliberately reflective about their own and each other's teaching. They move from an analysis of their own teaching based on impressions, to a situation where reflection becomes a much more integral part of teaching itself.[24]

Can Smyth's prediction about the power of instructional supervision become a reality? Can we overcome the impediments to reflective practice identified by Sykes? To answer these perplexing questions, we must shift our attention from theoretical prescriptions for empowering teachers through instructional supervision to empirical evidence of the efficacy of instructional supervision for promoting reflective teaching.

EMPIRICAL EVIDENCE ON DEVELOPING REFLECTIVE TEACHING BEHAVIOR

Empirical evidence on developing reflective teaching has focused on five interrelated questions:

---

[23] Gary Sykes, "Teaching as Reflective Practice," in *Critical Perspectives on the Organization and Improvement of Schooling*, ed. Kenneth A. Sirotnik and Jeannie Oakes (Boston: Kluwer Nijhoff Publishing, 1986), pp. 236–238.

[24] W. John Smyth, "Teaching as Learning: Some Lessons from Clinical Supervision" (paper presented at the annual meeting of the Australian Association for Research in Education, Brisbane, Australia, November 1982), pp. 3–4.

BEST COPY AVAILABLE

- How can reflective behavior be identified?
- Can teachers become more reflective?
- What specifically can teachers do to become more reflective?
- What specific supervisory behaviors encourage reflection?
- What are the effects of increased reflective behavior?

Almost all the studies reviewed here are case histories of the supervisory process, specifically the clinical supervision process. The case study is the most appropriate method for inquiry into the clinical supervision process. The philosophical underpinnings of clinical supervision provide for a teacher directed supervision process that focuses on expressed teacher concerns, therefore, experimental or quasi experimental studies in which the researcher chooses the variables of interest before entry into the setting are not appropriate. The variables of interest cannot be specified before entry into the research situation, they are specified by the teacher and supervisor during the clinical supervision process. Therefore, accumulating evidence from individual case studies is the appropriate method for aggregating research findings on the effects of clinical supervision on teachers and supervisors.

How Can Reflective Behavior Be Identified?

The identification of reflective behavior has focused exclusively on analyzing dialogue during supervisor-teacher conferences to identify teacher reflection. Zeichner and Liston, as well as MacKinnon, have developed systematic techniques for identifying reflective teacher behavior during supervisory conferences. MacKinnon, working with preservice elementary teachers, has combined Schön's problem-setting and Fuller and Bown's developmental conception of teacher concerns to develop a three phase cycle of reflective problem solving, reframing, and resolving. They use a clue structure for detecting reflective activity in the supervisory conference. The clue structure establishes a framework for specifically identifying the preservice teacher's reflective activity:

Clue 1. Can the phases of the reflective cycle be "seen" in the dialogue? Is there a period of reframing activity?

Clue 2. Is there evidence of a change in the perspective from which the classroom phenomenon is viewed? Specifically, does the teacher make a shift from using teacher centered to using student centered interpretations of the classroom event?

Clue 3. Does reframing result in a change in the conclusions about the problematic phenomenon or in the implications that are derived for practice? That is, is there a change in the "I should have's?"

Clue 4. In the course of reframing, does the teacher draw from his or her personal experience as a student to make sense of the pupil's position?[9]

---

[9] Allan M. MacKinnon, "Detecting Reflection-in-Action in Preservice Elementary Science Teachers" (paper presented at the annual meeting of the American Educational Research Association, San Francisco, April 1986), p. 11.

MacKinnon concludes (1) that preservice teachers can reflect if placed in a clinically supervised process fostering reflection and (2) that the clue structure formulated is effective in detecting reflection in action.

Zeichner and Liston developed the Reflective Teaching Index, a four-category system to identify preservice teachers, reflective behavior during conferences with their supervisors. The observer classifies teacher statements into one of four categories to determine the percentage of discourse at each level of reflection. The four categories constitute a hierarchy of reflective behavior, with categories 3 and 4 representing the highest levels of reflection.

> 1. *Factual*—statements refering to events that occurred during the lesson or are planned to occur during the lesson
> 2. *Prudential*—statements evaluating the effectiveness of actions that occurred or provide suggestions for alternative actions
> 3. *Justificatory*—statements focusing on the reasons that particular actions occurred or why alternative actions would be suitable
> 4. *Critical*—statements referring to the values, beliefs, and assumptions underlying the reasons given to support a course of action or potential course of action[9]

The systematic techniques developed by MacKinnon and by Zeichner and Liston for identifying reflective behavior seem useful and appropriate. Further research should determine their applicability to conferences with inservice teachers. Also, we need to develop methods for identifying reflective teaching that occurs outside the supervisory conference.

Can Teachers Become More Reflective?

Wildman and Niles asked teachers to provide a reconstructed description of classroom events from narratives, tapes, and personal recollection and found that teachers encountered some difficulties in trying to be reflective. Initially, the teachers could not distinguish between descriptive statements and judgmental statements lacking objective evidence. The teachers' talk also indicated that their understanding of the classroom was more utilitarian than analytical. Wildman and Niles credit this finding to the lack of time for reflection, as well as to the biased and truncated data collection when teachers were not trained in collecting and examining evidence. The researchers conclude that at least 20 to 30 hours of instruction is needed to train teachers in the skills required of the reflective practitioner. As the teachers experienced the empowerment of reflexive practice, they assumed even more control of the areas of reflection as the reflective skills generated new skills.

Wildman and Niles also focus on the difference between teacher control and supervisor control of the reflective process. Traditional models of educational reform and supervision have foisted change on the teacher, most often resulting in only temporary change, if any, in reflexive practice; however, the teacher controls the process and determines the areas of focus. Similarly, the reflective practitioner asking "How is what I'm doing affecting my students?" contrasts sharply with the product-centered teacher stressing the "what" and "how" of teaching, typically the goal of training programs and professional development programs. Because of their concern for students, teachers in the Wildman and Niles project faced a conflict in assuming the "nonteaching" duties of reflection that infringed on traditional "teaching" time.

---

[9] Kenneth M. Zeichner and Daniel P. Liston, "Teaching Student Teachers to Reflect," *Harvard Educational Review* 57 (February 1987): 23-48.

For teachers to become reflective practitioners, Wildman and Niles identify seven needs:

- observational description of classroom events to reflect on
- the skills to obtain and express classroom descriptions
- control of the reflexive process
- administrative support
- a "safe" environment for disclosing one's beliefs
- time for reflection
- collegial support and respect for teachers' knowledge[47]

Building on Schön's *The Reflective Practitioner*, Russell and Spafford explore clinical supervision from the perspective of fostering reflective practice by teachers; they reject the earlier finding of McFaul and Cooper claiming that sustained professional development is not possible in today's school environment. Russell and Spafford define the ultimate goal of clinical supervision: "A teacher who is more aware of the nature and impact of personal teaching actions and a teacher who has more deliberate control over those actions."[48] Reviewing Spafford's five years of experience in clinically supervised settings, they conclude that the real potential of clinical supervision is its peer-supervision aspect. Spafford says that in discussing and sharing her ideas on teaching, she boosted her self-confidence and achieved a feeling of greater significance through her collegial relationship.

In a case study, Potash focuses on initiating the clinical supervision process with a veteran teacher. He has shown the significant effect clinical supervision can have on facilitating even an experienced teacher's reflective practice and the positive effect on identifying and remedying classroom problems. As a principal charged with supervisory duties, Potash initiated a clinical supervision process with a veteran teacher of 15 years. The concern the teacher identified for data collection and analysis was his first period's unresponsive ness and presumed inhibition. Discussing the problem, the teacher and his supervisor were able to project several hypotheses and several experiments to discover effective methods for involving students more in the class and for improving the quality of student learning. The teacher recorded: "It has been my experience that the teaching/learning transaction is so complicated that attempts to describe and analyze it often become mired in vague generalities or meaningless details. Our conferences were most helpful in clarifying our goals, defining terms, and agreeing on specific objectives."[29] Over a five-week cycle, both supervisor and teacher recognized an increase in student participation supported by the data collected by the supervisor.

---

[47] Terry M. Wildman and Jerome A. Niles, "Reflective Teachers: Tensions Between Abstractions and Realities," *Journal of Teacher Education* 38 (July-August 1987): 25-31.

[48] Thomas Russell and Carol Spafford, "Teachers as Reflective Practitioners in Peer Clinical Supervision" (paper presented at the annual meeting of the American Educational Research Association, San Francisco, April 1986), p. 3.

In analyzing the process, the teacher noted that at one point he felt they had focused prematurely and, therefore, perhaps incorrectly on the technique employed to reach the intended goal. The observation indicates the need for constant reflection and reframing in the collegial relationship. In a summary assessment of the process, the teacher wrote:

> The process was stimulating and helpful. It was a pleasant change to have an administrator initiate and take an active and constructive role in helping to improve instruction. This program demonstrated that a supervisor need not be an expert in a particular subject area to be able to facilitate positive change and professional growth. It clearly demonstrated to me that my teaching behaviors are harder to change than I had thought they were and reminded me of the complexity of the teaching role. It has stimulated me to ask even more questions about my teaching and to continue to struggle with what it means to become an effective teacher.[30]

McCoombe reaches similar findings from his reflective journal on the clinical supervision process he experienced. He notes that he became more aware of his teaching when being observed and realized "what could be achieved with a little extra thought and effort."[31]

These four studies indicate that with the appropriate conditions veteran teachers can indeed become more reflective about their teaching. Furthermore, teachers' personal accounts indicate that increased reflectivity powerfully affects their beliefs about teaching.

What Specific Teacher Activities Promote Reflection?

Besides the studies by Wildman and Niles and by Potash reviewed earlier, Elliott has provided empirical evidence on specific activities that promote reflective teaching. His account of the Ford Teaching Project provides key findings about teachers' reflection, even though the project itself was not directed at reflection. The project was an attempt to involve teachers in a

---

[29] Larry Potash, "A Case Study in Clinical Supervision" (unpublished manuscript, The Pennsylvania State University, 1987), p. 3.

[30] Ibid.

[31] Murray McCoombe, "Clinical Supervision from the Inside," in *Case Studies in Clinical Supervision*, ed. W. John Smyth (Geelong, Australia: Deakin University Press, 1984), p. 49.

program of action research on the problems of carrying out inquiry discovery approaches in the classroom. Developed out of the curriculum reform movement, the inquiry discovery innovation seemed to be failing at the implementation level.

> The theories one consciously subscribes to are not necessarily those that unconsciously guide practice. The fundamental problem of curriculum reform lies in the clash between the theories of the reformers and those implicit, often unconsciously, in the practice of teachers. Reformers fail to realize that fundamental changes in classroom practice can be brought about only if teachers become conscious of the latter theories and are able to reflect critically about them.[32]

The project thus aimed at working collaboratively with teachers to discover practical, not theoretical, theories in action research. Specifically, the tasks were to identify and diagnose problems with carrying out the inquiry discovery approaches; to explore how far these approaches were generalizable; to test practical hypotheses; and "to clarify the aims, values, and principles implicit in inquiry-discovery approaches by reflecting about the values implicit in the problems identified."[33] Data collection for the project included teachers' reflective field notes, pupil diaries, teacher student discussion, tape recordings of classroom events, and case study reports by the teachers. An intriguing feature of this project was the inclusion of students in the reflective process.

But even the implementation of this innovation ran into trouble as teachers reported they did not have time for reflective teaching. Elliott notes: "Such skepticism is often well founded. Schools have not on the whole institutionalized support for reflective teaching. Teachers embark on innovations without the time and opportunity required for resolving the classroom problems they pose."[34]

The focus of the study moved to facilitating reflective or self monitoring teachers. The method of triangulation—gathering accounts of classroom events from teachers', students', and participant observers' perspectives—was employed. To develop self monitoring potential, Elliott suggested that teachers work through the following sequence of activities:

1. Listening to or viewing recordings of their teaching situation
2. Listening to or viewing recordings and then systematically noting salient patterns in their classroom behavior
3. 2, plus dialogue with participant observer
4. 3, plus dialogue with students about pedagogic values
5. Triangulation controlled by participant observer
6. Triangulation controlled by the teacher.[35]

---

[32] John Elliott, "Development Hypotheses About Classrooms from Teachers' Practical Constructs: An Account of the Work of the Ford Teaching Project," *Interchange* 7 (No. 2, 1976–77): 2.

[33] Ibid., p. 4.

[34] Ibid., p. 5.

[35] Ibid., p. 14.

BEST COPY AVAILABLE

At the end of this process, teachers should be able to act as participant observers in each other's classrooms.

By incorporating students' reflections with their own reflections and considering the stable data provided by the participant observer, teachers were able to better understand classroom events. As one teacher responded, "Indeed the value of this research to us may lie in the analysis the teachers make of their methods and their whole approach to teaching."[36]

What Specific Supervisory Behaviors Encourage Reflective Teaching?

A case study of the clinical supervision process by Turner-Muecke, Russell, and Bowyer built on Schön's foundation but focuses on a supervisor's reflection on her own professional behavior supervising a student teacher during two months of conferences. An outcome of the study was the premise that the supervisor's reflection in action was as important as the reflection being encouraged for the teacher.

Initially, the supervisor did not perceive that the student teacher was working at developing a collegial relationship in collecting and analyzing data, nor did the student teacher seem to share the supervisor's philosophy of teaching. The student teacher received the first verbatim transcripts with few comments and no signs of self-inquiry. This finding substantiates earlier conceptions of teacher concerns, which held that beginning teachers rely on personal experiences as students themselves and find it difficult to move beyond a self-centered perspective to a pupil-centered perspective. As the student teacher's supervisor noted, "I realized that her 'teacher-directed' orientation was very different from my own style."[37]

Concerned that her teacher was not demonstrating reflection or reflection in action and was not maintaining a reflective journal, the supervisor decided to reassess the collaborative clinical supervision arrangement. The supervisor cited this as the turning point in the collegial relationship. The student teacher's reactions and writings on the assessment indicated she had reached a stage of "inner personal concern and reflection on her progress as a teacher."[38] The supervisor herself cited the value of reflection in action as an important check on her development as a supervisor:

> In an interpersonal activity such as supervision, in which the data for discussion are obtained by one party observing the other, it is only too easy for the supervisor, trying to reframe and resolve a puzzle, to connect items in a causal sequence and be wrong. Sequences of observations and conferences, coupled with reflection by both parties, seem to be one good way to approach some kind of "truthful reality." Can we

---

[36] Donald Cooper and Dave Ebbutt, "Participation in Action Research as an Inservice Experience," *Cambridge Journal of Education* 4 (No. 2, 1974): 69.

[37] Lee A. Turner-Muecke, Tom Russell, and Jane Bowyer, "Reflection-in-Action: Case Study of a Clinical Supervisor," *Journal of Curriculum and Supervision* 2 (Fall 1986): 46.

[38] Ibid.

afford this kind of investment in our training process? Can we afford the results of a lesser kind of investment?[39]

In his report of a case study of clinical supervision with a first year teacher, Kilbourn cites the importance of autonomy, evidence, and continuity in the clinical supervision process. He attests to the importance of the teacher's selecting patterns for observation and reflection, noting that "improvement" occurred only when the teacher took an active role in the pattern analysis. After analyzing patterns in her teaching through the clinical supervision cycle, the teacher made a vital discovery: "So I guess it's my fault all along, really my technique. I was thinking they, the students, were incapable, and here I was holding them back myself. It's really ironic."[40]

Robinson, in his case study of clinical supervision with a third year teacher, views the failure of much of clinical and traditional supervision ironically because of the supervisor's inability to focus on the data instead of evaluating and judging the teacher. Robinson found that when the supervisor initiated suggestions for change, the teacher changed or modified the behavior only when the supervisor was in the room. But when the teacher noted patterns or findings in the data of things she wanted to change, the difference was measurable. As the data collected pointed to an approximation of her goals—longer wait time, more student involvement, increased volunteer involvement—her feeling of progress increased, encouraging her to take more control of the classroom. Noting that it was an impressionistic rather than quantifiable evaluation, Robinson cites this enhanced professional self image as one of the major benefits of reflective practice.[41]

In sum, five supervisory behaviors are most important in encouraging reflective behavior: (1) reflecting in action by the supervisor, (2) encouraging teacher autonomy, (3) using data as evidence for salient teaching patterns, (4) observing and conferring over time, and (5) helping teachers develop the skills to interpret the data collected on their teaching and allowing them to play a major role in interpreting the data.

What Are the Effects of Increased Reflectivity?

Increased reflection by teachers positively affects their beliefs about teaching (McCoombe and Potash), as well as their self esteem (Robinson). Increased reflection by teachers also has other benefits: greater interest in self improvement, greater interest in data on their teaching behavior, and greater attempts at encouraging reflection and critical thinking by students.

---

[39] Ibid., p. 48.

[40] Brent Kilbourn, "Linda: A Case Study in Clinical Supervision," in *Case Studies in Clinical Supervision*, ed. W. John Smyth (Geelong, Australia: Deakin University Press, 1984), p. 79.

[41] Jeffrey Robinson, "A Second Pair of Eyes: A Case Study of a Supervisor's View of Clinical Supervision," in *Case Studies in Clinical Supervision*, ed. W. John Smy[illegible]eelong, Australia: Deakin University Press, 1984), pp. 5-42.

Cruickshank and Applegate report several findings from their "Reflective Teaching" program developed at Ohio State University:

> "Reflective Teaching" gives teachers time to think carefully about their own teaching behaviors and opportunity to view other experienced professionals in action. Teachers find themselves engaged in a meaningful process of inquiry which leads them toward renewed self-esteem and interest in teaching. As a result, teachers become more reflective about teaching and more interested in self-improvement. "Reflective Teaching" is an opportunity for meaningful teacher growth.[42]

Holly developed a reflection-through-recollection program with public school teachers using diaries and forum sessions. Because of this approach to reflection, Holly did not supply the teachers with the stable data she collected during her observations. The teachers' reflections in their writings and in their discussions were based solely on their own recollections. A positive outcome of the program, as Holly notes, was that teachers began to ask for her data to provide themselves with different perspectives of their teaching.[43]

A subsidiary benefit of the Wildman and Niles study of teacher reflection was their disclosure of the ramifications of systematic teacher reflection: "Teachers may be more able or willing to lead their students in systematic reflection."[44] One teacher participating in the training shared a taping of her classroom with her students in a group problem-solving process. She was spurred on by her own reflection: "I had no idea. . . . We had never stopped to think about it."[45] She used the tape with her students to "stop and think about" what was going on in the classroom.

Examining the barrage of recent literary reports, Greene applies inquiry knowledge to understanding student achievement. She argues that the knowledge many of today's students possess may be of the nonreflective, noncritical, consumerist sort instead of being self-reflective and critical. Greene contends that students' knowledge, like measured knowledge, may be either "reflectively gained" or "passively absorbed."[46] Students, like their teachers, learn more when knowledge develops through reflection.

CONCLUSION

This review of empirical research on nurturing reflective teaching leads to three main conclusions: (1) several important requirements must be in place to encourage reflection in teaching, (2) definite benefits result from helping teachers to be more reflective, and (3) future research on this topic is needed. Seven requirements are most important:

---

[42] Donald R. Cruickshank and Jane H. Applegate, "Reflective Teaching as a Strategy for Teacher Growth," *Educational Leadership* 38 (April 1981): 554.

[43] Mary Louise Holly, "Teacher Reflection on Classroom Life: Collaboration and Professional Development," *Australian Administrator* 4 (January 1983): 1–6.

[44] Terry M. Wildman and Jerome A. Niles, "Reflective Teachers: Tensions Between Abstractions and Realities," *Journal of Teacher Education* 38 (July–August 1987): 28.

[45] Ibid.

[46] Maxine Greene, "Toward Possibility: Expanding the Range of Literacy," *English Education* 18 (December 1986): 231–243.

- a descriptive record of actual classroom events
- a collegial relationship in which the teacher feels safe, supported, and respected
- teacher control over the supervisory process
- continuity in the supervisory process over time
- constant problem reframing and reflection by both teacher and supervisor as the heart of the supervisory process
- time and support for collegial interaction
- time to develop the skills needed for reflection

These requirements convincingly affirm the potential of clinical supervision that Cogan and Goldhammer envisioned for nurturing reflective practice. Numerous texts and articles have emerged since the inaugural Harvard-Newton Summer Program of 1962-63 and Goldhammer's landmark 1969 edition of *Clinical Supervision*. Still, although many educators involved in supervision can recite Goldhammer's five-stage sequence or Cogan's eight-phase cycle, or some variation on the theme, equally as many have yet to discover the vital component of clinical supervision that separates it from other forms of supervision.[47] Sergiovanni states: "I believe that clinical supervision at present is too closely associated with a workflow. . . . The intellectual capital inherent in clinical supervision is in my view more important than its workflow as articulated steps, strategies and procedures."[48] The intellectual capital overlooked is teachers' nurturing of reflective practice.

Reflection is the driving force behind successful clinical supervision programs—the programs that make a difference in the lives and instruction of the teachers who participate in them, as well as in the lives of the students they teach.

> In reality, the task of the supervisor is to make sense of messy situations by increasing understanding and discovering and communicating meaning. Since situations of practice are characterized by unique events, uniform answers to problems are not likely to be helpful. Since teachers, supervisors, and students bring to the classroom beliefs, assumptions, values, opinions, preferences, and predispositions, objective and

---

[47] Morris Cogan, *Clinical Supervision* (Boston: Houghton Mifflin, 1973); Robert Goldhammer, Robert H. Anderson, and Robert J. Krajewski, *Clinical Supervision* (New York: Holt, Rinehart & Winston, 1980); Cheryl Granade Sullivan, *Clinical Supervision: A State of the Art Review* (Alexandria, VA: Association for Supervision and Curriculum Development, 1980); Noreen Garman, "The Clinical Approach to Supervision," in *Supervision of Teaching*, ed. Thomas J. Sergiovanni (Alexandria, VA: Association for Supervision and Curriculum Development, 1982); Thomas J. Sergiovanni, "Landscapes, Mindscapes, and Reflective Practice in Supervision," *Journal of Curriculum and Supervision* 1 (Fall 1985): 5-17.

[48] Thomas J. Sergiovanni, "Toward a Theory of Clinical Supervision," *Journal of Research and Development in Education* 9 (Winter 1976): 20.

value free supervisory strategies are not likely to address issues of importance. Since uncertainty and complexity are normal aspects in the process of teaching, intuition becomes necessary to fill in between the gaps of what can be specified as known. Since reality in practice does not exist separate from persons involved in the process of teaching and supervising, knowing cannot be separated from what is to be known.[49]

"Clinical supervision is a more robust conceptualization of what it might mean for teachers to become actively involved in the reflexive process of analyzing and theorizing about their own teaching, its social antecedents, and possible consequences."[50] Smyth posits that only through this reflexive process will teachers transform their teaching and will supervision achieve any significant effect.

The review of the literature on reflection also leads to the conclusion that when the requirements identified above are put in place, important benefits result:

- Teachers become more aware of and better observers of their own classroom behavior.
- Teachers see themselves as having greater control over their own practice—they are empowered.
- As they begin to experience the process of reflection, teachers tend to become even more and more reflective.
- When they seek to encourage reflective teaching, supervisors tend to become more reflective about their supervisory behavior.
- As teachers become more reflective, they seek to promote greater reflection by their students.
- As teachers become more reflective, they begin to believe that they do have the power to influence student learning significantly.

The literature review leads to one final undeniable conclusion: The need for empirical inquiry that looks at the process of supervision more directly from the reflective practitioner's perspective is great. Case studies and research programs are needed that delve more deeply into the process of nurturing reflective teaching through instructional supervision. So far, case studies of the supervision process have generally attempted to link supervision to specific changes in teacher behavior, but that focus must change. Case studies are needed that link supervision to teacher reflection in both short- and long-range time frames. Nine specific questions should be addressed:

- How can supervision be used to engender teachers' reflection on action?

---

[49] Thomas J. Sergiovanni, "Landscapes, Mindscapes, and Reflective Practice in Supervision," *Journal of Curriculum and Supervision* 1 (Fall 1985): 11–12.

[50] W. John Smyth, "Toward a 'Critical Consciousness' in the Instructional Supe[illegible]on of Experienced Teachers," *Curriculum Inquiry* 14 (Winter 1984): 426.

- How can supervision be used to foster teachers' reflection through recollection?
- What are the short- and long-term effects of reflection on action and reflection through recollection?
- What is the relationship between teacher reflection and teacher behavior?
- What supervisory behaviors help engender reflection at the three different levels identified by Van Manen?
- How can the impediments to reflection identified by Sykes and by Wildman and Niles be overcome?
- What is the relationship between reflective teacher behavior and student behavior?
- Do other models of supervision (i.e., other than Cogan's and Goldhammer's) result in more reflective teaching practice?
- What procedures can be used to identify reflective teacher behavior occurring outside the supervisory conference?

Only by inquiry into questions such as these can we adequately understand and appraise the power of instructional supervision for promoting teachers' reflective practice.

JAMES F. NOLAN is Assistant Professor of Curriculum and Supervision, College of Education, The Pennsylvania State University, University Park, PA 16802.

TONYA HUBER is a doctoral student and graduate assistant in curriculum and instruction, College of Education, The Pennsylvania State University, University Park, PA 16802.

BEST COPY AVAILABLE

Reprinted with permission from Education and Urban Society,
Vol. 22 No. 2, February 1990.

MEANS FOR FACILITATING REFLECTION

ROBERT B. KOTTKAMP
Hofstra University

This article is frankly a "how to" piece, intended to illustrate the use of various means for sparking, facilitating, and sustaining reflection at various levels and preparatory stages of professional practice. Application oriented though it may be, the presentation is conceptually grounded. My worst fear is that "reflection" and "reflective practice" may become only the latest in the casualty list of ideas with great potential that have been reduced to the level of tinkling jargon through uninformed use, primarily as symbolic smoke screens to convince our critics that we *are* working to make things better. If used in faddish or mandated ways without understanding and appreciation of the larger perspectives found in other articles in this issue, the means suggested here become mere gimmicks whose only potential is the further, unnecessary validation of Seymour Sarason's (1971) axiom that the more things change, the more they stay the same.

DEFINITIONS

Reflection and reflective practice are defined variously in this journal and elsewhere. Hewson, Hewson and Jensen, working in medical education, accent " 'replaying' performances . . . for the purpose of articulating what is or was happening . . . making knowledge which is normally tacit more explicit" (1989, p. 4). MacKinnon, in a more restrictive view from teacher education, sees reflection as "a conceptual move," a shift from interpreting classroom events from a teacher or student teacher perspective to a pupil perspective, a "reconstruction of experience through which the teacher . . . begins to attend to features . . . previously ignored" (1989, p. 3). Hart emphasizes the "integration of knowledge with action through thought" (this issue). Schön's image is that of a "dialogue of thinking and doing through which I become more skillful" (1987, p. 31). Osterman describes a "challenging,

EDUCATION AND URBAN SOCIETY, Vol. 22 No. 2, February 1990 182-203
© 1990 Sage Publications, Inc.

BEST COPY AVAILABLE

focused, and critical assessment of one's own behavior as a means toward the development of one's own craftsmanship" (this issue).

For the purpose of this discussion, reflection is considered to be:

> A cycle of paying deliberate, analytical attention to one's own actions in relation to intentions—as if from an external observer's perspective—for the purpose of expanding one's options and making decisions about improved ways of acting in the future, or in the midst of the action itself.

The distinction in the last phrase between future and present acknowledges Schon's (1983) important differentiation between reflection-on-action (reflection on a past event) and reflection-in-action (reflection in the midst of an ongoing action). The latter type is the more difficult to achieve, but the more powerful for improvement of practice because it results in "online" experiments to adjust and improve one's professional actions. It is more difficult to achieve because the actor must simultaneously attend to performing the action and observe and analyze his or her action, as if from an external perspective. Further, in reflection-in-action the actor is the sole collector of data on the event.

Reflection-on-action is accomplished "offline" at a time when full attention can be given to analysis and planning for the future without the imperative for immediate action. Further, though reflection is always self-analytical, when the focus is on a past event the actor may be aided by others who provide a facilitative structure, including the collection and presentation of data on the event under scrutiny. The great majority of attempts to teach and facilitate reflection concern reflection-on-action. However, optimal professional performance assumes reflection-in-action. Those who work to facilitate reflection seem to assume that, with enough practice and consciousness, actors will be able to move themselves from reflection-on- to reflection-in-action. This assumption has yet to be tested.

CHARACTERISTICS OF MEANS AND THEIR APPLICATIONS

This article presents a sort of catalogue of means currently being used to facilitate reflection, and includes references to specific printed sources, programs, and individuals from which greater detail may be sought. The specific means and applications may be categorized on a number of overlapping sets of characteristics. The *temporal* dimension of present versus past focus has already been discussed. The *medium* dimension differentiates among the modalities used for collecting and presenting data for the reflective process. Media include writing, reading, observing and listening, talking, and electronic reproduction. The *number* dimension differentiates between reflective activities undertaken by individuals and groups. Though the majority of means are used with individuals, corporate reflection is both a possible and a potentially powerful means of improving professional practice. *Locus of initiation* is another dimension on which means and their uses vary. Some means are completely self-initiated, while others are suggested, structured and facilitated by external agents. The *reality* dimension differentiates between means which focus on events in actual professional practice that have real outcomes for both the practitioner and clients, and those which focus on contrived events such as simulations and role plays. Contrived settings are "safer" learning situations because they buffer both professionals and clients from real consequences, while the professional is in the awkward position of unlearning old and learning new ways of acting. But means that use contrived situations lack the complexity and importance of real professional events.

Osterman (this issue) has more fully described the relationship between reflection and Kolb's (1984) four sequential stages of experiential learning: concrete experience, observation and reflection, formation of abstract concepts or generalizations, and active experimentation. The means described here key in at different stages of the sequence. Some begin with reflection on prior experience, others begin with the generation of experience itself.

Finally, though not a dimension like the others, the examples I use are drawn from numerous fields and from various levels of professional practice: teacher preparation, supervision and staff development, administrator preparation, medical and higher education.

A CATALOGUE OF MEANS

WRITING

Writing is a powerful medium for learning, and a powerful means of facilitating reflection on action. Emig (1977) described the uniqueness of writing both as a language process and as a learning mode, by differentiating it from listening, talking, and reading. Writing is both process and product. As a learning activity it is simultaneously enactive (hand), iconic (eye), and symbolic (brain) in nature. Thus, both right and left sides of the brain are engaged in integrative reinforcement. Writing is self-produced feedback, available for immediate review and re-evaluation, and, because of its slower and self-regulating pace, it allows for a moving back and forth among past, present, and future. Writing, as a product, leaves a trail of the evolution of ideas as a form of long term feedback. It is an active, engaging, and personal process.

Put in different terms, writing is often a reflective process in itself. We often pause, cycle back, reread and rethink the very descriptions and ideas we are in the process of formulating and inscribing. We also capture our thought processes in a product to which we can later return to reassess, search for options, and plan for the future. When writing is done by the one reflecting, it also provides a durable self perspective on events that can then be compared with perspectives, generated in other ways on the same events.

JOURNALS

Adaptable in form and purpose, journals as a means of learning and reflection have both a long history and a strong set of contemporary advocates (Fulwiler, 1987). Barnett and Brill (1989), for example, use two kinds of journals in their principal preparation program. The "daily" journal is a running account of important events and interactions of concern to people – administrators, teachers, students, and parents – in internship settings. This journal is used, in part, to help aspiring principals to acquire an administrative and leadership perspective on events as they seek to shift roles from teacher to principal. Interns chronicle what they "see" or attend to (and, by absence, what they don't see) as they go about learning activities. The daily journal is used extensively in teacher and administrator preparation, especially in conjunction with the clinical elements of student teaching and administrative internship. Data in these records are available for reflection in a wide variety of ways. The journalist may search for patterns and meaning alone, or may be aided by outside readers such as fellow interns, mentors, or professors.

A "critical incident" journal is more focused and structured than the free flowing daily variety. Here, selected important experiences are documented in detail. Barnett and Brill provide their students with a common format: (1) a brief summary description, (2) important questions generated by the event, (3) a list of new jargon or concepts, (4) subjective reactions to the incident, (5) a description of what they learned and how it might alter their future responses (1989, p. 10). The reflective nature of this form of journal needs no elaboration.

Patricia Schmuck (1988) uses another variation called the "learning journal" in a preparatory program for school superintendents. This is a loosely structured journal for focusing thoughts about practice. She reads the contents periodically, and she expects them to provide the focus of some class discussions. Schmuck views these journals as "a particularly valuable reflective tool for students 'finding their voices'" (p. 11).

Another form of journal that I use in the classroom might be termed "stop action." Action is literally stopped at various points during role plays or simulations, and students are asked to reflect on what has just transpired, and to write notes to themselves. Prior to a role play, for example, they record their intentions for action, what they wish to accomplish and by what means. Often, at the conclusion of the role play and before discussion of any kind, we stop to jot reflections on behavior in relation to intention. Sometimes the reflection time is after discussion; sometimes it is both before and after discussion. The "stop action" form of journal "models" and legitimates time for reflection, making it as important as traditional sharing through discussion.

CASE RECORDS

Building on earlier work by Silver (1986), Osterman, at The Silver Center for Reflective Principals, Hofstra University, uses case records as a means for improving the reflective capacity of elementary and secondary principals.[1] Writing a case record is a structured activity to support reflection-on-action. Principals choose problematic situations, either resolved or still in process, and describe them on case record forms. The record includes responses to basic questions: What is the nature of the problem? What alternatives did you consider? What did you hope to accomplish? What action did you take? What were the results of your actions? How would you evaluate the process? In reviewing your actions, what are your reflections, insights or conclusions?

The basic reflective value of writing is incorporated in producing the case record. Once the record is completed, there are a number of further uses that may spur reflection. Records may be shared and discussed with other principals or used as a vehicles for reflection in administrative internships with mentors or professors. Sharing with others who are encountering the same general types of problems is especially powerful. Further, as the Silver Center collects and files case records from a national constituency, it will be possible for individuals to receive packages of records on the same issue. Multiple cases should expand the number of available alternative approaches for an individual to consider. The Silver Center has also received a grant to pilot a computer network to interconnect selected Long Island principals and the university. The written nature, of both the cases and other communications in response to them, results in products of a lasting nature which are

BEST COPY AVAILABLE

available for a wider audience then typical phone conversations among administrators.

Though Osterman is concentrating on the principal's role and its associated problems, it is easy to adapt the case record to any role, for example, teacher, chairperson, college administrator. The case record approach might be thought of as a structured form of critical incident journal.

CONTRIVED SITUATIONS

This group of means includes case studies, role plays, simulations, and such specialized applications as micro-teaching. All of these are contrived in the sense that they lack the major dimensions of real professional practice, typically real outcomes for the client, or real professional responsibility for the practitioner. They also vary along a dimension of thinking through doing. Case studies generally provide a basis for examining multiple options for behavior and stating what one "would do" or "wants to do" in the situation. Simulations, role plays, and micro-teaching require one to put the "want to dos" to some form of action test. All forms of contrived situations lack the complexity of actual practice situations, however, they do have the advantages of being flexible, adaptable to classroom and laboratory settings, and able to generate public data available to a whole group.

Case studies and simulations are available from a number of sources. For administrative preparation, the University Council for Educational Administration has sets of materials for various roles in several kinds of school districts. The Kennedy School of Management at Harvard has also developed a number of cases applicable to administrative preparation. Role plays may be run off these or similar materials by having them acted out in class. The actual experiences of students also provide a rich and motivating basis for developing role plays. The case records previously described, for example, may be converted into role plays by simply using the statement of the problem and a bit of extended background material.

Contrived situations are not of themselves reflective vehicles. Some use them to demonstrate a one "right answer," others as opportunities to reflect. For reflective purposes these situations allow for generation of behavior, which the actor may then process either alone or with the support and help of others. I make broad use of contrived situations when working with students to test their educational and administrative platforms. What participants actually do in the simulations or role plays contains elements of their theory-in-use. They can then compare what they did to the espoused theory contained in the platform. As an instructor, I find it most important to provide a structure that facilitates feedback from other participants to the central actor. What the actor needs for reflection is *descriptive* reports of how his or her actions were experienced by others, the outcomes produced in others, and his or her intentions as the others experienced them. These are grist for reflection. Telling the actor how to behave differently destroys the possibility for reflection. The instructor has a very important role in guiding the use of contrived activities. Simply "throwing out" a case or role play for students "to kick around" is counterproductive to reflection, because the typical response is to tell the actor how to do it better.

Bruce Barnett, in an Indiana University principal preparation program, makes similar use of contrived situations (Barnett & Brill, 1989). In addition, he has students reflect upon and chart their behaviors relative to a set of skills that were advanced by the National Association of Secondary School Principals as criteria for identifying administrative candidates. This reflection provides aspirants with a comparison of their actions with the expectations advanced by their professional association. Discrepancies indicate areas for work. Barry Jentz, in workshops on "How to Tell People Things They Don't Want to Hear," videotapes short role plays.[2] The two-person contrived situations run from only thirty seconds to a minute, but provide powerful data for reflection by the participant and observers.

Donald Cruickshank at Ohio State University has, over the past ten or more years, developed a system of simulated teaching for the preservice education of teachers. Termed "reflective teaching," his goal is to prepare teachers who are "students" (1987). He divides classes into groups of four to six with each individual playing, in rotation, the roles of teacher and learner/feedback agent. The designated teachers prepare and teach a 10- to 15-minute "common reflective-teaching lesson," knowing that the learner's achievement outcomes and satisfaction levels will be assessed on standard feedback instruments at the conclusion of the lesson. Achievement outcomes and satisfaction feedback are then shared in a small group discussion guided by structured questions. Sample questions include: What does the group believe contributed most to achievement and satisfaction? What does the group believe got in the way of achievement and satisfaction? What did you learn or recall about effective teaching and learning? After 15 minutes of discussion, the small groups are all brought together, and the instructor leads a cross-group discussion with questions eliciting descriptions, for example: What happened that facilitated learning and satisfaction? Students play the role of teacher at least once, and play that of learner several times. One cycle of reflective teaching takes from 60 to 75 minutes.

In research on this structure for developing reflection on teaching, students who were engaged in the process produced proportionately more analytical statements about teaching and learning than did a control group (Cruickshank, Kennedy, Williams, Holton, & Fay, 1981). The basic structure of Cruickshank's simulated activity has transfer potential to other areas, such as supervisory conferences and administrator meetings with parents.

INSTRUMENT FEEDBACK

Standard diagnostic, counseling, and even research instruments may be of tremendous value in sparking the "surprises" which lead to significant reflection, or in providing analytical categories for reflection on one's theory-in-use. I have found that the Myers Briggs Type Indicator (Myers & McCaulley, 1985) provides broad, meaningful, and helpful feedback to students engaged in the platform writing and testing process. This instrument, based on Jungian concepts, provides information on how the individual tends to process information, focus attention, and come to decisions. Further, it focuses on an individual's strengths. It is used widely in counseling high school, liberal arts, theological, business, and nursing students, and for enhancing work groups in corporate, university, and social service agencies.

Since administrators work in ambiguous circumstances, I also use feedback from a tolerance/intolerance of ambiguity scale (Budner, 1962) to provide aspirants, or practicing administrators or supervisors, with data useful for reflecting on their actions and comfort levels in various situations. Barnett and Brill (1989) use Kolb's (1985) Learning Style Inventory to give their principal-preparation students information about the particular stages of experiential learning they are most likely to employ. Cruickshank (1987) suggests using various classroom observation instruments (Simon & Boyer, 1967, 1969, 1970; Flanders, 1970) as aids to reflection for students in teacher preparation. These are but a few examples of instruments that are useful to facilitate individual reflection. At the corporate level, many of the survey feedback methods associated with organizational development may be used for group reflection. Schmuck and Runkels' *Handbook for Organizational Development in Schools* (1972) is an excellent source of such instruments.

ELECTRONIC FEEDBACK

Tape and video recorders provide complete and replayable records of events for reflection on action. Although tape recorders are limited to audio data, they produce complete records that are inexpensive, readily available, relatively unobtrusive, and that can be operated by the individual seeking the data or by others. Audio tapes are easy to reproduce, take home, and can even be played while commuting to work.

Teachers at all levels may tape their classes, supervisors may tape their pre- and postconferences, principals may tape their opening day speeches, and leaders may tape their meetings. In organizational development work, I have used tapes of meeting interactions both for my own reflection, and for that of individuals and groups. Others have used taped "self-talk" as "electronic journals," in ways similar to those outlined in a previous section. Though not as inherently reflective a means as writing, talking to yourself on tape makes explicit what might otherwise remain tacit.

Videotape is the most complete means available for capturing events for later reflection-on-action. The potential power of video as a reflective medium was illustrated by a conversation with a new graduate dean who had the familiar problem of a tenured, highly reputed faculty, many of whom taught miserably. He was able to convince a number of faculty members to be videotaped in the classroom, and promised that the tapes were for *their eyes only*. He kept his word. The simple act of observing their own teaching apparently raised sufficient dissonance between the way they thought of themselves as professors and what they saw, that it motivated some of them to improve. Student evaluations also indicated this improvement.

Allan MacKinnon (1989) described the use of videotapes of *student* groups engaged in science labs as a basis for student-teacher supervision in a reflective teaching practicum. In this case, his reflective goal was to make a "conceptual move" in the interpretation of classroom events, from a student-teacher perspective to a student perspective. The video data provided both the completeness and the replay capability that enabled the teachers to "appreciate the 'reasonableness' of the pupils' ideas" (p. 3).

Marina Hewson et al. (1989) used videotape as a major source of behavioral data to assist medical educators – attending physicians – reflect on their clinical teaching of residents. Staffing sessions in which the physician worked with residents were regularly taped. The physician also received resident feedback from a paper and pencil inventory on clinical teaching behaviors. From these data, the educational supervisor negotiated with the physician to concentrate on selected clinical teaching behaviors. The supervisor and physician then viewed the videotape together. The tape review was the process through which the physician was able to indicate dissatisfaction or "provocative dissonance" with his or her clinical teaching behavior. Reflection was facilitated, and with the help of the supervisor in the role of "coach," the physician could reframe the teaching event and make plans for improved practice. The three roles in the medical education illustration are parallel to standard supervisor, teacher, and student roles in K-12 education. Videotape is also frequently used in microteaching laboratories. One major difference between this and the medical example is that, in the former the tape is a "real" situation, whereas in microteaching the situation contains both real and contrived elements.

The field of clinical psychology has traditionally used videotapes of therapy sessions for reflection and improvement of practice. When tapes are viewed by a group, the emphasis is on reframing or reconceptualizing the problematic situation being observed, rather than on criticizing the actions of the practitioner. The description in the last article in this issue, of the power of videotape for moving a collaborative group forward with individual and corporate reflection, is a graphic and concrete example of the importance of moving this older tradition of learning and problem solving into education.

Though it produces rich and completely objective (or "nonfiltered") data, videotaping has drawbacks. Although the equipment is growing increasingly light and compact, it is still cumbersome compared to a small audio tape recorder. Its presence is more obtrusive, at least originally, and may affect behavior more than a tape recorder. And if any focal movements are required, another person is needed to operate the equipment.

METAPHOR

Metaphor is a human construction created as part of the fundamental drive to name, categorize, and give meaning to the events of life (Flowers, 1980). For teachers and administrators working in complex, pluralistic, and ambiguous work environments, metaphor is one means of creating and clarifying personal meaning amidst multiple values, claims, and pressures (Provenzo, McCloskey, Kottkamp, & Cohn, 1989). As such, metaphor is a powerful and flexible means for reflection.

Larry Wells, social studies teacher at Hillsboro High School, Missouri, developed the following extended metaphor in reflecting upon his teaching style and contrasting it with that of a colleague:

> I have a colleague who teaches as though he's on the Delta Queen [a paddle wheel riverboat] and we're all sitting here on the Delta Queen. He's got a microphone in his hand, and he's talking about over here is this and over there is that, and everybody's just sitting there looking back and forth. When I think of myself, and I hope — you know I don't always do this — my kids are in the

> canoe, and they're coming down the stream, and we go along the routes where it's somewhat wavy, and we go along the rapids, and they turn over sometimes. You've got to let them turn over and get wet and paddle back upstream sometimes, go back through a little obstacle here, but along the way, they're going to experience that river so much more than somebody who's on the Delta Queen, who's just listening. (Cohn, Kottkamp & Provenzo, 1987, p. 135)

Wells' metaphor helps him to categorize and attach meaning to his ticular style and intent in teaching, and to contrast it with the other styles l intentions which some of his colleagues pursue. It also provides him with asis to reflect on whether his teaching behavior has been congruent with intention in a particular lesson. In describing his metaphor we also see an tance of reflection-in-action. When he stated, "you know I don't always this," he is showing awareness of the discrepancies between some of his ching and his intentions. Though elicited through an interview, Wells' taphor was self-initiated. Supervisors of student teachers, inservice teach-., or administrative interns might also ask their supervisees to develop their n general metaphors of teaching or administration, or metaphors for rticular lessons or administrative acts.

Several years ago, I asked a doctoral student whom I believed to be an ective high school principal whether he used any metaphors to guide his rk. "Yes," he responded enthusiastically, "I am Captain Kirk of the rship *Enterprise*'"!" He went on to unpack his meanings taken from the taphor. Like the Captain, he was ultimately and completely responsible the overall safety, welfare, and achievements of his organization. Like rk with his crew of Scotty, Mr. Spock and others, he too had a number of mpetent and motivated teachers, administrators, and non-certified personl – all specialists in one work area or another – on whom he could rely for spe- cifics of task accomplishment, but it was his responsibility to keep m all working within the larger picture and design of the *Enterprise*. He ne was responsible for communicating the vision of that mission to the ults and students, and for seeing that the school was moving toward the ssion in a balanced way.

For this principal, the Captain Kirk metaphor was a highly packed, shortnd set of meanings about his work. His metaphor was a basis for reflection. was a readily available image, useful in maintaining balance and purposeful rection in the daily fray of administration, the activities of which are quently characterized in terms of brevity, variety, and fragmentation eterson, 1977).

Reflecting on the metaphor helped him to "keep his head straight" when he was deciding whether to delegate a task or do it himself, when weighing organizational versus individual interest or welfare, and when deciding what the "big issues" worthy of greater reflection are, among the myriad issues presenting themselves to him in the course of the day. The metaphor was his, not something imposed externally. Its creation and elaboration no doubt arose from a series of reflective acts, and it provided him with a basis for continuing acts of reflection on action and reflection in action.

Several other examples suggest how external agents may help actors to create metaphors as a means to initiate and continue reflection. Helen B. Regan (1989) reports using metaphor during a trust building session on a project in which she was attempting to gain commitment from several schools to join a year long teacher principal collaborative leadership project. She asked each participant to describe a metaphor for his or her school. The metaphors of two principals were offered as examples:

> My school is a hot air balloon concealed in a large box with an open top. It is actually quite colorful, but no one can see that because of the box. The balloon is not tethered, but it does not take off because the basket is filled with bricks. I see myself having just scrambled on board and struggling to throw out the bricks. I want the balloon to take off so everyone can appreciate the beauty of its colors, but the bricks are very heavy. I'm going to have a hard time throwing them out myself.
>
> My school is an exuberant marching band. It's playing enthusiastically and marching off up a hill. Everyone has on a colorful uniform. But the uniforms are a little askew and the players are not all together. I'm up on the hill watching and I can't decide what to do. If I'm the band leader maybe I should get out in front and set the tempo and the direction for the march. But I can't see them when I'm in front, and I worry that I'll lose touch with their talent and enthusiasm. Maybe I could be more effective coordinating things from the top of the hill, but I'm not sure how to get my message across from that spot (Regan, 1989, pp. 5-6).

The Captain Kirk, hot air balloon, and marching band metaphors are all from high school principals, but they might just as easily have come from elementary teachers or university department chairpersons. In fact, though she does not describe them, Regan had each of the six or seven teachers who accompanied the principals produce their own metaphors for the school. Considered privately, each metaphor contains tremendous potential to spark and continue reflection, but shared publicly the various metaphors, with her rich and multiple images for the same school, provide both a powerful and motivating basis for corporate reflection, and a potential for investigating and initiating collaborative leadership and decision making. Consider the possibilities, for instance, of requesting each member of an elementary, secondary, or university department to bring a metaphor of the group to its next meeting as a spark for reflection about goals, or new directions, or improved processes of working together.

Gray and Deal (1982) recorded yet another use of metaphor to spark reflection in a corporate setting. In this case, the goal was the initiation of school improvement projects in several South Bronx elementary schools. As external organizational development agents, Gray and Deal wanted to move the schools to a position of being self-critical and self-developing organizations. Their primary means for the development process was metaphor, in this instance, the telling of multiple stories from the perspectives of many roles – principal, teachers, paraprofessionals, parents, and students. Through a structured process of telling and listening to the specific metaphors in various stories (e.g. "our collective experience is like that of a tribe of wanderers lost in a deep jungle where a few have survival skills and many are near panic" and "our collective experience reminds me of an orchestra with no string section and two trumpeters plotting to destroy the conductor" (Gray and Deal, 1982, p. 7), the various role groups in the two schools began to forge a "functional we." The functional we is the analog of the "I" in personality structure; it is a set of meanings shared by all groups, in a developing community of perspective and interest, rather that in isolated role groups with their own dissimilar and conflict-laden stories. The functional we is forged through the process of reflecting on multiple metaphors, and it becomes "a self-conscious place from which action is contemplated and initiated" (Gray & Deal, 1982, p. 5). In one school the functional we emerged easily; in the other it was a struggle. In the second case, the group struggle finally produced a metaphor of the school as "centerless." In reflecting on the metaphor, someone finally blurted out: "The principal doesn't lead!" The taboo was broken. The principal indicated a reluctance to dominate, and had no idea that they perceived this as a leadership vacuum; he expressed willingness to reexamine his leadership style. Silence turned to energy, and the process of developing common meaning began in earnest.

Philosopher Paul Ricoeur (1977) argues that metaphor enables an individual to describe discrepancies between the experienced and the expected, to make explicit the pluralistic meanings and values in a situation, and to create new understandings in that situation. All three attributes of metaphor make

BEST COPY AVAILABLE

it a powerful, flexible, and useful means for reflection among professional practitioners. Educators seem to use a profusion of metaphors (see for example, Provenzo, et al., 1989). They are ready grist for reflection, when we consciously attend to our own creations. And in the role of facilitator of reflection for others, metaphor is a means readily available.

PLATFORMS

Writing and testing an educational or administrative platform is a process drawn directly from Argyris and Schön's *Theory in Practice* (1974). Some conceptual background is needed before describing a platform development process. Argyris and Schön differentiate between an actor's "espoused theory" and an actor's "theory-in-use." The espoused theory contains the beliefs, values, and assumptions concerning action that he or she can make explicit. It is a public statement of intention. The theory-in-use, on the other hand, is a set of beliefs, values, and assumptions that actually guides observable action. It is often tacit; that is, the actor is often unable to state explicitly the beliefs, values, and assumptions underlying his or her actual behavior, even though this underlying theory-in-use results in relatively consistent behavior. The relationship between espoused theory and theory-in-use is the relationship between a stated intention and an action's result. Intention and action may be either congruous or incongruous. Awareness of incongruity between what an individual espouses and what he or she does is one of the strongest motivations for personal change (Zaltman, Florio, & Sikorski, 1977). In order to release the potential for change inherent in the realization of a discrepancy between one's intent and result, the tacit aspects of the theory-in-use must be made explicit. It is here that reflection enters. Through reflection on such discrepancies, and with the help of others supplying data and feedback, it is possible to move the theory in action from the tacit to the explicit realm. Only when that which actually guides an actor's behavior is made explicitly available to him or her is there potential for behavioral change.

A platform is one's espoused theory, one's stated beliefs and assumptions for guiding professional practice, or more colloquially, one's philosophy of education or administration (Kottkamp, 1982; Sergiovanni & Starratt, 1983). Writing a platform engages the author in a reflective process. In my experience, few teachers or administrators, even those with many years of practice, have ever put themselves though the disciplined and difficult process of reflecting upon and recording the assumptions and beliefs that le their professional intentions. If taken seriously, writing a platform is gh, but rewarding, work.

xperienced professionals, in my experience, often feel a great sense of lequacy, embarrassment, confusion, or other negative emotional states. y often request a structure to facilitate their struggles to think and write. giovanni and Starratt (1983) suggested ten educational issues to be lressed in a platform, for example: the aims of education, the image of the rner, the value of the curriculum, the image of the teacher, and the ferred teacher-student relationship. For supervisors, they suggested two litional issues: the purpose of supervision, and the preferred process of ervision. Barnett and Brill (1989) in their work with aspiring principals gested that administrative platforms be written in relationship to seven ments of an instructional leadership model (Bossert, Dwyer, Rowan, & e, 1982): personal, district, and external characteristics, principal management behavior, school climate, instructional organization, and student learn. My own preference is to suggest possible issues as a provisional ucture, but also to encourage students to develop platforms that authentilly represent themselves, rather than having them adhere to a particular ory or authority. I usually have students write both a preliminary platform d then a revised version. Many stay close to a model lik [illegible] iovanni and arratt's in the initial attempt, but produce m [illegible] al and honest atements in the revision. If the platform is to be tested for discrepancies ith actual performance, it is important that it truly represent the individual, cluding both the major issues focused upon and those ignored.

Platform writing is facilitated by structuring time for students to discuss small groups their feelings states, as well as the content of their work. (The credible power of emotions unleashed during the analytic examination of ne's professional activity is vividly described by Teresa Curtis and Kathryn ietlow in the last article of this issue.) Once their platforms are written, I k them to respond to the work of the others in their group, according to a ght structure. First, they look for internal logical consistency and inconsistency among the parts. Second, they state any assumptions which seem to nderlie the platform, or its parts, which the author has not explicitly lentified. As instructor, I do not grade them, but I respond to all platforms ccording to exactly the same criteria. The point of the feedback is to provide ach individual with information that is useful for and likely to help trigger eflection about the platform. All responses are to be *descriptive* rather than udgmental – a point discussed at length at the end of this article. When tudents want to praise, argue with, or give advice to a colleague, they are sked to stifle the urge to do so. Rather, I ask them to use their desire to criticize and advise as information to reflect about themselves. Judgments they make about others – if viewed as mirrors – are really statements about their own beliefs, values and assumptions. They are requested to record these stifled judgments in their own journals as grist for their own reflection. Students find that remaining descriptive is *very* difficult; they gain insight when they have managed to do it.

Once the platform is formulated, even in a preliminary stage, it may become a vehicle for reflection on the congruity or incongruity between espoused theory and theory-in-use, between intention and action, or between "what I say and what I do." What is required for this stage of reflection is a number of "tests," that is, segments of professional action which can be compared with the platform. These tests may be generated in a wide variety of ways. They can come from actual daily practice, events in an internship, behavior in a small group during class, or contrived situations like role plays. Reflection on intention/action or platform/behavior relationships may be greatly facilitated by *descriptive* data from external sources. Such sources include electronically reproduced playbacks of events, structured feedback in the form of instruments, and the many varieties of feedback from other persons who witness or feel the effects of the action, such as role play participants, mentors, internship supervisors, and reflective interviewers. When the source of feedback is another human being, it is difficult, but important, to remain descriptive. After a role play, for example, the important information needed by the central actor to spark reflection often includes *descriptions* of what others perceived the outcome to be and *descriptions* of their emotional states during and after the events. This is the kind of information the actor needs to make a self assessment about whether the intent of the action was accomplished, and if not, why. What actors do not need from others – role play participants or omniscient instructors – is advice. Advice, judgment, so-called constructive criticism, and *praise* all inhibit reflection, as will be explained below.

The platform writing and testing sequence may be used broadly, and in imaginative ways. Several of my former administrative students have adapted these ideas as a basis for supervising new teachers. Novices write platforms, which are then tested through frequent and *complete* cycles of clinical supervision. Others, as chairpersons, encouraged department members to write and to share platforms as a means of working toward better definition of the department's goals and vision. In all such cases, collaborative action was a goal and the former student initiated work with subordinates or colleagues by openly sharing his or her platform first.

SHADOWING AND REFLECTIVE INTERVIEWING

Shadowing and reflective interviewing are a pair of means for encouraging reflection among practicing administrators developed by Bruce Barnett and his colleagues at the Far West Laboratory. These processes emerged from research that was conducted on the instructional management of principals, (Dwyer, Lee, Rowan, & Bossert, 1983) in which the subjects of the research reported that they liked being followed around and later interviewed by the researchers, because it reduced their sense of isolation, gave them someone with whom to discuss their daily work, and helped them to think about their own actions. Shadowing and reflective interviewing were then developed as central components of the Lab's peer-assisted leadership (PAL) Program (Barnett, 1985, 1987).

Shadowing and reflective interviewing were developed for pairs of practicing principals. But, when Barnett moved to a university position, he adapted the process to pairs of mentors and principal-preparation students (Barnett & Brill, 1989). Shadowing consists of one of the members following the other through at least four hours of typical administrative practice. The shadower takes accurate, specific, and descriptive notes. Later, the shadower conducts a reflective interview of at least one hour by asking questions based on the data recorded during the shadowing. The purpose of the interview is to help clarify the intent, meaning, and outcomes of the partner's actions. The partners then switch roles; the shadower is shadowed, and then interviewed.

The process sounds easy, but the skills, orientations, beliefs, and level of trust necessary for the process to yield worthwhile results takes considerable time and concentrated effort. In the original format, the principal pairs went through six full-day workshops spaced at six-week intervals. However, the process is reported to facilitate reflection in both roles. The one being shadowed receives release from isolation, descriptive data on his or her actions, and non-threatening questions designed to spark reflection. The shadowing partner receives release from isolation, and the opportunity to observe a peer in action over a prolonged period. The recording and reviewing of data to develop interview questions, as well as the interview process itself, also sparks reflection for the shadower (Barnett, 1987).

In the original PAL program, the partners went on to additional stages of work. Each learned to cluster shadowing data by themes, and from these they constructed a model of observed professional practice for the partner. Though Barnett's original work did not include platform writing and testing, it is easy to see the parallel between the models of practice presented to partners and the depictions of theory-in-use as constructed over considerable observation time by a trusted and helpful outside agent.

MIXES AND MATCHES

Although presented as relatively distinct, the various means for reflection may be, and have been, combined to increase and reinforce their individual values. Hewson and colleagues (1989), in helping attending physicians to reflect upon their clinical teaching, combined feedback from a standard instrument on clinical teaching, videotape of the teaching, and a process similar to reflective interviewing. Videotaping, rather than human observing and describing, is used as a means of data. In the medical education situation, videotape may be used because the subject is relatively stationary. But videotape is not well suited to gathering data on the "on the go" practice of principals, hence the utility of shadowing.

My work with platforms incorporates journals, contrived situations, case records, and instrument feedback. Barnett and Brill (1989), in a recently developed principal-preparation program at Indiana University, combined PAL shadowing and reflective interviewing processes with simulations, journal writing, a framework of instructional leadership, and platform development in the context of a cohort of students who remain together for their entire preparation program. The possibilities of combining and interweaving means of facilitating reflection are limited only by imagination.

A CAUTION ON HELPING OTHERS TO REFLECT

All approaches to reflection as a vehicle for improving professional practice are based on a typically unstated assumption: *The practitioner is in total control* of deciding whether to reflect, and, as a result, whether and how to change his or her practice. We cannot reflect for anyone else. We cannot force anyone else to change behavior through reflection. Thus, although reflection *is* a powerful means for improving the practice of those who desire to do so, it is not a panacea. We cannot use it to change the recalcitrant, the malicious, the unmotivated, or those who have given up all hope.

Having made clear the assumption about locus of control over reflection itself, it is still true that, in many of the applications discussed in this article, another person helps the one who reflects by setting conditions or structure and by providing data necessary for reflection-on-action to occur. This external helping relationship is, for example, almost universally the case in teacher and administrator preparation programs. As helpers and data providers we can never guarantee that reflection will occur, but it is almost certain that we can prevent it from occurring. *How* we "help" conditions whether or not we really *do* help.

Communication is the central issue in helping. The principle is simple. We must communicate using *descriptions* and refrain from using *prescriptions*. But actually doing this is very difficult, and, for most of us it requires a great deal of reflection-on- and reflection-in-action.

Descriptions are communications that carry messages of fact. They are about what "is" or "was." Though not always completely "scientific," a descriptive communication contains a message that most reasonable people could come to consensus about. In transactional analysis terms, descriptions are "adult messages" (Berne, 1964). The ultimate in useful, descriptive messages for reflection are video or audio tape recordings. These are objective records of actions in replayable form. They are not filtered by human beings. However, once we begin to talk about the tape with the one attempting to reflect, we can either communicate descriptively or lapse into prescriptive communication.

Prescriptions are communications that carry messages of evaluation. They can be straightforward evaluations in the form of judgments of good or bad, beautiful or ugly, excellent or poor, right or wrong. They can be slightly more oblique evaluations, in the form of "you should. . . ," or " you ought to . . ." In transactional analysis terms, these are "critical parent messages" (Berne, 1964). Prescriptions can also be evaluative messages containing *untested* assumptions about the motivation of another person, for example, "You were making excuses to the student about. . . ." In all cases the sender of the prescription is deciding something for or about the receiver. The prescriber is in one form or another taking a superior stance, telling the other what to do, taking the responsibility for creating meaning, and deciding on behavior change for the actor.

Prescriptions result in "defensive communication" (Gibb, 1961), and a reduction in trust and openness. They are heard as: "Defend yourself!" On receiving a prescription, the listener stops listening, stops attending to data such as a videotape, and prepares a retort of defense. For example, "You ought to . . ." typically elicits the response, "But you don't understand. If you were in this situation. . . ." "You were making excuses . . ." may elicit result, "I wasn't making excuses. . . ," When in fact, the person may have been making excuses. But, in reflection a self made conclusion to that effect is required. If the external "helper" makes the conclusion and presents it prescriptively, the possibility of the actor reaching that conclusion him or herself all but evaporates. The result is the same even when the prescription is "positive," as is forcefully illustrated by Teresa Curtis in the last article of this issue. In explaining why she was able to change her attitudes, beliefs, and behaviors through a collaborative reflection project, she cites the non-critical, non-judgmental climate established. She concludes: "*But we were also not praised*. We really had to draw on what we believed in individually and to make decisions. It had to come from within" (emphasis added). Prescription of any kind, even the positive sort, stops reflection and absolves the actor of responsibility.

The descriptive versus prescriptive issue is well illustrated in the history of clinical supervision. As originally conceptualized, clinical supervision is a premier opportunity for reflection. In the pre-conference the teacher and supervisor decide on the focus; that is, they decide what kind of data the supervisor is to collect. In the post-conference the supervisor presents data; that is, he describes to the teacher what was seen, so that he or she may come to conclusions about what happened and what to do about it. Prescription plays little or no role in the process. As practiced, "clinical supervision" bears little resemblance to the original ideas. The pre-conference is often not held, instead, the supervisor makes a unilateral evaluation about what is important to examine. Further, the post-conference frequently consists entirely of prescription, and, even where description is included, prescriptions must be delivered in the end, because of state or district mandates. Evaluation, which is what "clinical" has become, almost completely precludes the probability of real reflection on practice. The teacher simply doesn't listen, much less reflect.

The dominant and persistent use of prescriptive language by supervisors has been documented. It has also been shown that supervisors *can* learn to become more descriptive, but it is a process that requires months of concentrated work – not a one day shot (Johnston, 1985). The problem appears to be at least two-fold. First, we are so practiced in delivering prescriptions in our roles as teachers, administrators, professors, and parents, and so supported in our belief that this is what we are supposed to do, that we literally lack another image of how we might behave. Second, to suspend prescribing is to give up the assumption that others will change because we tell them to, and to adopt the assumption that real change is controlled by the one acting.

This description "stuff" is tough to accept and tougher to act on. When I work with students in the platform sequence, we spend more time on providing descriptive feedback than any other single issue. It is tough to learn to be a mirror for someone else, when we are so used to being the authority and the one with answers. It is tough, but it is central to establishing the kind of caring, collaborative, open, trusting, participatory setting described by Osterman (this issue) as essential to nourishing reflective practice.

NOTES

1. Detail concerning case records, the newsletter *Praxis*, and the work of the Silver Center for Reflective Principals may be obtained from Dr. Karen Osterman, Director, The Silver Center for Reflective Principals, Hofstra University, School of Education, Hempstead, NY 11550.

2. Detail on this workshop and related issues may be obtained from Harry Jentz, Leadership and Learning, Inc., 99 School Street, Weston, MA 02193.

REFERENCES

Argyris, C., & Schön, D. A. (1974). *Theory in practice: Increasing professional effectiveness*. San Francisco: Jossey-Bass.

Barnett, B. G. (1985). Peer-assisted leadership: A stimulus for professional growth. *Urban Review, 17*, 47-64.

Barnett, B. G. (1987). Using reflection as a professional growth activity. In W. Greenfield (Ed.), *Instructional leadership: Concepts, issues and controversies*. Newton, MA: Allyn and Bacon.

Barnett, B. G., & Brill, A. D. (1989). *Building reflection into administrative training programs*. Paper presented at the convention of the University Council for Educational Administration, Cincinnati.

Berne, E. (1964). *Games people play*. New York: Grove Press.

Bossert, S. T., Dwyer, D. C., Rowan, B., & Lee, V. G. (1982). The instructional management role of the principal. *Educational Administration Quarterly, 18*(3), 34-64.

Bowers, C. A. (1980). Curriculum as cultural reproduction: An examination of metaphor as a carrier of ideology. *Teachers College Record, 82*(2), 267-289.

Budner, S. (1962). Intolerance of ambiguity as a personality variable. *Journal of Personality, 30*, 29-50.

Cohn, M. M., Kottkamp, R. B., & Provenzo, E. F. (1987). *To be a teacher: Cases, concepts, observations guides*. New York: Random House.

Cruickshank, D. R. (1987). *Reflective teaching: The preparation of students of teaching*. Reston, VA: Association of Teacher Educators.

Cruickshank, E., Kennedy, J., Williams, J., Holton, J., & Fay, D. (1981). Evaluation of reflective teaching outcomes. *Journal of Educational Research, 74*(1), 26-32.

Dwyer, D. C., Lee, G. V., Rowan, B., Bossert, S. T. (1983). *Five principals in action: Perspectives on instructional management behavior of principals*. San Francisco: Far West Laboratory for Education Research and Development.

Emig, J. A. (1977). Writing as a mode of learning. *College Composition and Communication, 28*(2), 122-128.

BEST COPY AVAILA

Flanders, N. (1970). *Analyzing teaching behavior.* New York: Addison Wesley.

Fulwiler, T. [Ed.] (1987). *The journal book.* Portsmouth, NH: Boynton/Cook Publishers.

Gibb, J. (1961). Defensive communication. *Journal of Communication, 11,* 141-148.

Gray, R. H., & Deal, T. E. (1982). *Stories as a strategy for improving urban schools: Toward the creation of a "functional we."* Paper presented at the meeting of the American Educational Research Association, New York.

Hewson, M. G., Hewson, P. W., & Jensen, N. M. (1989). *The role of reflection in professional medical education: A conceptual change interpretation.* Paper presented at the meeting of the American Educational Research Association, San Francisco.

Johnston, C. A. (1985). *The effects of training in transactional analysis upon the interpersonal communication transactions of graduate students in supervision.* Unpublished doctoral dissertation, Rutgers University.

Kolb, D. A. (1984). Experiential learning: Experience as the source of learning and development. Englewood Cliffs, NJ: Prentice Hall.

Kolb, D. A. (1985). *The Learning Style Inventory: Technical manual.* Boston: McBer and Company.

Kottkamp, R. B. (1982). The administrative platform in administrative preparation. *Planning and changing, 13,* 82-92.

MacKinnon, A. (1989). *Reflection in a science teaching practicum.* Paper presented at the meeting of the American Educational Research Association, San Francisco.

Myers, I. B., & McCaulley, M. H. (1985). *Manual: A guide to the development and use of the Myers-Briggs Type Indicator.* Palo Alto, CA: Consulting Psychologist Press.

Peterson, K. D. (1977). Principals' tasks. *Administrator's Notebook, 26,* 1-4.

Provenzo, E. F., McCloskey, G. N., Kottkamp, R. B., & Cohn, M. M. (1989). Metaphor and meaning in the language of teachers. *Teachers College Record, 90*(4), 551-574.

Regan, H. B. (1989). *The darkness of school collaboration.* Paper presented at the meeting of the New England Research Organization, Portsmouth, NH.

Ricoeur, P. (1977). *The rule of metaphor: Multi-disciplinary studies of the creation of meaning in language.* Toronto: University of Toronto Press.

Sarason, S. (1971). *The culture of the school and the problem of change.* Boston: Allyn and Bacon.

Schon, D. A. (1983). *The reflective practitioner.* New York: Basic Books.

Schon, D. A. (1987). *Educating the reflective practitioner.* San Francisco: Jossey-Bass.

Schmuck, P. A. (1988). *The Institute for Executive Leadership: A prepatory program for school superintendents.* Paper presented at the convention of the University Council for Educational Administration, Cincinnati.

Schmuck, R. A., & Runkel, P. J. (1972). *Handbook of organizational developmental in schools.* Palo Alto, CA: Mayfield Publishing Company.

Sergiovanni, T. J., & Starratt, R. J. (1983). *Supervision: Human perspectives* (3rd ed.). New York: McGraw Hill.

Simon, A., & Boyer, E. G. (1967, 1969, 1970). *Mirrors for behavior: An anthology of classroom observation instruments.* Philadelphia: Research for Better Schools, Humanizing Learning Program (ERIC Document No. ED 029 833).

Silver, P. F. (1986). Case records: A reflective practice approach to administrative development. *Theory into Practice, 25*(3), 161-167.

Zaltman, G., Florio, D., & Sikorski, L. (1977). *Dynamics of educational change.* New York: Free Press.

BLE

SECTION 4

Reprinted with permission from the Peabody Journal of Education, Volume 64, Number 3.

Action Research: Comments on Current Trends and Future Possibilities

Diane W. Kyle and Ric A. Hovda

In synthesizing the contributions to this theme issue, we have concluded that they convey three key messages about action research: (1) its purposes and applications differ widely; (2) despite these differences, certain trends echo across the writings; and (3) if developed appropriately, action research holds promises as an important facet of educational reform efforts. Our purpose in this concluding article is to comment on these broad issues, drawing as needed from the work and thoughts of the preceding authors.

Differing Purposes and Uses

Corey in the early 1950s advocated action research as a way practitioners could solve problems and improve instruction within their own classroom and school settings. As illustrated by many of the preceding articles, this view prevails as one important purpose for action research. Although the contexts and initiating influence to become involved have differed, many of the authors describe action research projects which ultimately have had the same aim as Corey's. Practitioners have "discovered" action research through university coursework or through some type of sponsored project, and in most instances their projects have focused on solving some type of problem ("How can the writing process be implemented in a kindergarten?" "How can curriculum development—or supervision—or university-level teaching—be improved? How can my students be motivated to want to learn?")

DIANE W. KYLE and RIC A. HOVDA *are associate professors in the School of Education at the University of Louisville, Louisville, Kentucky. Their work with teachers as action researchers has been supported in part by the Center for the Collaborative Advancement of the Teaching Profession, School of Education, University of Louisville.*

Since Corey's time, however, other purposes for action research have emerged, and these, too, are reflected in the preceding contributions. Ross, for instance, argues for more reflective practitioners, ones able to see the connection between educational aims and immediate practice. In her view, the processes of action research can facilitate the development of practitioners able to make such connections.

Action research as discussed by Holly, by Whitford, Schlechty, and Shelor, and, to some extent, by us has an important role and purpose in the growth-oriented environment of "learning" and "professional development" schools. It is through the opportunity to engage in activities such as action research, these authors argue, that teachers are acknowledged and nurtured as decision-makers. Nixon, too, views action research as a process to address the critical interfaces in the emergent agenda for educational change.

Kemmis and DiChiro address the most global (and perhaps most ambitious) purpose for action research. From their socio-political perspective, they see action research as a means of empowering teachers and, therefore, as a contributing force in the effort to change the social order.

Thus, activities labeled as "action research" may take many forms and may reflect a variety of stated and unstated purposes. We could argue that these varying perceptions diminish the potential of action research, that activities associated with action research should be easily identifiable, and that we should strive for consensus about the fundamental purpose of this work. Such arguments may make sense, but they also may miss a significant point.

Action research is intentionally idiosyncratic, personalized, and contextual. Questions for study emerge from needs which are unique to individuals in particular settings. Consequently, the various rationales for this work and types of projects are not only not surprising but also are likely to continue to characterize the literature.

Furthermore, the interpretations of purpose may depend on whether one is an involved actor in the process or an interested observer. For instance, the writings suggest that teachers and administrators, faced with the opportunity to answer questions or resolve problems, see the utilitarian purpose of action research as the most compelling and indicate less interest in the theoretical, philosophical, or political goals espoused by others.

Consequently, we will, in all probability, continue to find examples of action research studies which disclose the particular, written by practitioners for practitioners. And, we will continue to find writings about action research — analyses of individual or collected studies, insights on

BEST COPY AVAILABLE

ways to improve this work, or challenges about needed changes or new directions. The clear message, though, is that, although purposes and uses may differ, action research has captured the interest and involvement of many. Also, despite these differences, several common trends are apparent and should be noted.

Trends

Several trends are noticeable in the recent resurgence of interest in educational action research. Among these trends are using action research for curriculum evaluation, establishing practitioner-researcher networks, and institutionalizing action research. While these are significant developments, one other trend deserves special attention because of the way it influences any discussion of action research. Although a precise label is difficult to assign, the trend is intimately tied to the concept of collaboration.

Collaboration in some cases is seen as role groups, i.e., university faculty and teachers, working together on a research topic of common interest. In other cases, these same role groups are together as a means of facilitating the work of one primary role group, i.e., university faculty working with teachers. And yet in other cases, collaboration is seen as an important feature within a single role group to sustain and motivate the work, i.e., practitioner-researcher support groups. While collaboration in whatever form is not new to action research, it is taking on a changed perspective.

Nixon points out that even Lewin in the 1940s viewed action research as an activity aimed at realizing the "common good" rather than the individualistic conception of "the good." In addition, he suggests that the 'self-evaluative element of action research is essentially a collaborative one, as practice is studied within a framework of a shared, purposeful endeavor. Collaboration, viewed in these ways, is an integral part of the action research process. The change, then, is not in the collaborative perspective of the action research process but rather the way in which collaboration functions and therefore impacts on the work of role groups, the degree and type of institutional support, and the topics addressed. The types of collaboration suggested by Whitford, Schlechty, and Shelor (cooperative, symbiotic, organic) are helpful in thinking about the nature of different types of collaboration.

While action research has clearly developed a more collaborative perspective in recent years, that perspective is most often characteristic of either the cooperative or symbiotic types. This is evident in the reported work of contributors Ham, Hovda and Kyle, Smulyan, Oja and Pine, Oberg and McCutcheon, and Chism, Sanders, and Zitlow. Quite distinct from this work is the more "organic" perspective on the function of collaborative action research suggested by Whitford, Schlechty and Shelor and implied in the papers by Holly and by Kemmis and DiChiro. What is suggested here is that while all collaborative efforts may be focused on change, the very nature of the collaborative perspective in large part determines the extent of not only the type of change possible but the pervasiveness of that change.

A companion trend is an increasing recognition that the focus of action research work is rarely an isolated event, but rather is a social process that is socially distributed. Early writing about action research concentrated on problematic concerns of individual teachers, and little attention was given to the socio-political nature of those concerns. However, it appears that even though individual concerns continue to be a focus of action research, the broader contextual dimensions are now being taken into account. Most probably this has occurred because change is not probable when the "responsible parties" in making change are not an integral part of the research process. As Kemmis and DiChiro point out, educational practice is not an individualistic endeavor. Rather, practice occurs in a context with many "responsible parties;" therefore, including these parties in the action research process makes it innovative and potentially revolutionary. As Holly points out, action research can be at odds with, and undermining of, a school's "true function." In fact, he argues, action research is a complex innovation which has the potential of disturbing the deep structures of schooling.

Many of the constraints mentioned by contributors McKernan, Hannay, Nixon, Smulyan, and Hovda and Kyle can be seen as representative of these "deep structures" of schooling. What is called for by many, then, is fundamental change in schools. Although the language used to discuss the labels for such change varies, the overall intent appears to be quite similar. Whitford, Schlechty and Shelor, talk of schools as developmental organizations and the importance of a systemic response to reform. Within such a context, they maintain, action research plays a vital role in the development of knowledge. Holly's conception is similar in that he discusses a school's true function as being a developmental culture. In such a culture, instead of adopting innovations, schools adopt the capability to become innovative as a means of self renewal. Holly characterizes this as a "homeostasis of improvement." Kemmis and DiChiro propose an even broader and more pervasive view of the action research process and its potential impact on educational change. Their point of view moved beyond the individual school, and educational establishment to the greater sociopolitical arena. But in all three discussions, the recognition of action research as a socio-political force that threatens *and* is threatened by the existing organization of schools is clear.

While the descriptive accounts of action research work presented do not directly address these socio-political concerns, it is clear that these concerns are embedded in the suggestions for the implementation, continuation, and establishment of action research as a critical process in educational change. Serious consideration of the importance of socio-political dimensions on the potential influence of the action research process in educational change appears to be a necessary condition in the effectiveness of action research.

Educational Change

As we have learned, action research is a powerful idea. The recognition of its potential provides a connecting link among these contributions. We have heard teachers share how their insights have deepened as a result of their intense study of practice. We have heard university researchers elaborate on the merits of working collaboratively with teachers on shared research problems. We have heard of how action research can help us learn more about curriculum development and instructional supervision. We have heard how action research can facilitate teachers' reflection and can become a significant facet of educational and political reform efforts.

Why has action research captured such interest in the educational community? What is its appeal? What *is* the hope? Perhaps the most compelling explanation resides in the recognition that educational change has been critically needed, that we have needed new visions of what schools are, of how students learn, and of what constitutes the profession of teaching.

As we have grappled with these challenges, we have sought new approaches and new paradigms. Witness, for example, the increased number of qualitative or interpretive research studies. These have provided a way to explore troublesome questions about the contingent and contextual nature of classroom and school settings.

Inherent in these efforts has been the realization that, without practitioners' involvement and contributions, many questions will remain unanswered, and our knowledge of teaching and learning will remain incomplete. We have also realized the necessity of focusing on teaching as a profession and of exploring ways in which teachers might find the challenge and stimulation needed for them to grow and stay involved. However, this raises a critical question. If we advocate such activities for teachers, what forums can we provide for them to share their work? The two examples in this issue offer convincing evidence of teachers' abilities to engage in inquiry and to communicate their findings and insights. But would their work be considered worthy by "scholarly" and "academic" journals? Do we need new journals which support teachers' action research? Do we need to reconsider policies for publishing in established journals? Questions such as these must be addressed.

It is not surprising that we find an emerging interest in action research and an accompanying commitment to sustaining this work. Action research has the potential of increasing the knowledge base if we have the opportunity to learn from the findings and insights provided by practitioners. And, through the opportunity to engage in action research, many practitioners may find new opportunities for professional growth. The contributers to this theme issue have helped us recognize the possibilities of action research, and have challenged us to find ways of accomplishing them.

ADDITIONAL RESOURCES

Educational Leadership, volume 48, Number 6, March 1991. The issue's theme: "The Reflective Educator." The Association for Supervision and Curriculum Development, 1250 N. Pitt St., Alexandria VA 22314-1403. Stock No. E9103

Goswami, Dixie; Stillman, Peter. (eds.) (1987). Reclaiming the Classroom: Teacher Research as an Agency for Change. Boynton/Cook Publishers, Inc., P.O. Box 860, 53 Upper Montclair Plaza, Upper Montclair, NJ 07043 ($10.75) 242pp.

This book of essays addresses how and why to do research in the classroom as a teacher. Each of its four sections is prefaced with interviews with Cindy Myers, Ken Jones, Patricia Reed and Betty Bailey respectively. The entire book, written by teachers, for teachers, contains first person accounts of classroom teachers' experiences with action research.

Kiefer, Barbara,(1990), Toward a Whole Language Classroom. Articles from "Language Arts," 1986-89. National Council of Teachers of English, 1111 Kenyon Rd., Urbana, IL 61801 (Stock No. 54964-3020; $5.95 members, $7.95 nonmembers). 79pp.

This book is a collection of articles originally printed in "Language Arts," the membership journal of the elementary section of the National Council of Teachers of English. The book responds to the thousands of teachers looking for ways to incorporate student-centered, collaborative learning strategies into their classrooms. the articles draw heavily upon the experiences of reflective teacher-researchers who have adapted approaches based on the whole language philosophy to meet the unique learning styles of their students.

Livingston, Carol; Castle, Shari (1989). Teachers and Research in Action. NEA School Restructuring Series, National Education Association, Professional Library, Box 509, West Haven, CT 06516 ($10.95) 106pp.

This book highlights the use of research and other forms of knowledge for meaningful school reform by faculties engaged in the National Education Association's "Mastery in Learning Project". This project is an school-based education reform initiative designed to help school faculties restructure their schools to ensure that students achieve "mastery." The focus of the book is the use and creation of the knowledge base by project faculties.

Nonaka, Ikujiro. (1991) "The Knowledge-Creating Company" Harvard Business Review. November-December 1991

Senge, Peter. (1990). The Fifth Discipline: The Art and Practice of the Learning Organization. Doubleday, NY.

Sirotnik, Kenneth A. (1989) "The Schools as the Center of Change." in Schooling for Tomorrow: Directing Reforms to Issues That Count. Sergiovanni & Moore (eds.). Allyn and Bacon, Needham, MA 02194

The following is an excerpt from Sirotnik's chapter in Sergiovani and Moore's book. The entire chapter, as well as the entire book, are well worth reading.

The School as the Center of Change

KENNETH A. SIROTNIK
University of Washington

There are over 2.6 million of them in our nation's public elementary and secondary schools. Together, they constitute over 67% of the 3.9 million staff of all types employed by the local education agencies across the nation. They make up 98% of the total educational staff serving and supporting districts and schools.[1]

Who are they? They are the *educators*—teachers, principals and other administrators, special educators, counselors, librarians, and aides—who staff the public school system at the building level. They are the people who spend their work days behind the walls of schools and doors of classrooms, educating the nation's children. Classroom teachers alone—nearly 2.2 million of them—account for over 26 billion teacher-student contact hours each academic year in public elementary and secondary schools across the nation.[2] Clearly, what goes on in those classrooms is much the same as what went on a generation ago, and a generation before that, regardless of national commission reports, state reform movements, or even directives from local educational agencies.[3]

That the centers for educational change and school improvement are anywhere else than in the nation's schools would be a difficult proposition to defend in light of these statistics. In my experience, I have encountered very few educators who were willing to argue that change was centered in committee rooms in the District of Columbia, in state departments of education, in school districts, or departments of education in universities and colleges. Yet the history of attempts to effect

school reform suggests otherwise: these attempts have, by and large, been top-down exercises, intervention strategies fashioned in the tradition of Frederick Winslow Taylor's principles of scientific management.[4] The "time and motion" studies of the turn of the century have become the research, development, diffusion, adoption, implementation, and evaluation studies of modern times.

It has only been recently—the last several years, really—that an alternative paradigm for improving schools has been taken seriously in the reform proposals and actions of educational agencies. After a long history of advocacy in the literature on educational change,[5] the idea that educators in schools must become empowered agents in their own school improvement processes is finally coming into favor. The trend toward building-based decisionmaking in many districts and schools, although a bit short of the liberating experience some have advocated, is certainly a step in this direction.

The purpose of this chapter is to celebrate the coming out of a go idea—that the power to effect significant educational change is, indeed in the hands of educators in schools. Yet, although I will construct an argument for schools as the centers of educational change, they certainly are not alone in their efforts. I have deliberately avoided terminology like "the school as the *unit* of change" or "the school as the *basis* of change," in order to avoid the impression that all our eggs for educational change and school improvement are in the baskets of school buildings. To say that something is at the center implies a good deal around it. Ignoring the impact (for better or worse) of district, county, and state educational agencies, educational consultants and change facilitators, colleges of education, and parent and other community groups would be professing ignorance of the *ecological* dynamics surrounding the public schooling of children and youth and the problems of accountability and responsibility that go with it.[6] However, if schools and what goes on inside them are not at the center of the educational ecology, then current efforts toward change and improvement are horribly misguided. My choice of terminology—the school as the *center* of change—should therefore be obvious and the implications clear.

Watkins, John M.; Lusi, Susan-Follett (1989). *Facing the Essential Tensions: Restructuring from Where You Are.* Paper presented at the annual meeting of the American Education Research Association, 1989. Contact, John Watkins, The Regional Laboratory for Educational Improvement of the Northeast and Islands, 300 Brickstone Square, Suite 900, Andover, MA 01810 (1-800-347-4202) 56p

This paper examines a project involving teams of teachers, school administrators, and district-level people from Coalition of Essential Schools (CES) member schools. The CES is a high school reform movement devoted to strengthening the learning of students by reforming each school's priorities and simplifying its structure. The paper discusses the common principles of CES as well as the methodological issues raised by the CES project. Included is a discussion of a framework for collaborative action research in restructuring schools. Conclusions indicate that action research and collaboration are important strands of effective reform.